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스포츠 매니지먼트 석사 학위논문

# Strategic Management of Training Facilities for Success in Elite Sport

Case Study of:

High-Performance Training Centers of Ecuador

성공적인 엘리트 스포츠의 전략적 관리를 위한  
에콰도르의 High-Performance Training Centers 사례 연구

2019 년 8 월

서울대학교 대학원

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## **Abstract**

# **Strategic Management of Training Facilities for Success in Elite Sport: Case Study of High-Performance Training Centers of Ecuador**

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This research aims to examine how the High-Performance Training Center can become a key factor to achieve success in elite sport in Ecuador. In order to do so, a qualitative research was performed using in-depth interviews with the main constituencies of the organization, who are: elite athletes, elite coaches, managers and sport science directors.

The theoretical framework for the present research is the Sports Policy factors leading to International Sporting Success ‘SPLISS’ model

developed by De Bosscher, Bingham, Shibli, Van Bottenburg, and De Knop (2006) , the ‘state of the art’ of training environment’ proposed by Nikolai Böhlke and Maja Neuenschwander (2015), they provided the guide to explore the subject of study.

Management models for sport organizations were slightly adapted to the context of the subject of this study and combined in a three-stage process. According to the findings, key resources were identified and analyzed to develop a strategy. The models are 1) Input-throughput-output conceptualization of a system proposed by Packianathan Chelladurai (2014), 2) Conditions of a Competitive Advantage from Robinson & Minikin (2012), and 3) The Links among resources, capabilities and competitive advantage in NOCs by Robinson & Minikin (2012). Based on the analysis, a clear strategy and policies are suggested to be implemented.

The research purpose was reached. It determined that the High Performance Training Centers can become a key factor to achieve elite sport success through the implementation of the strategy ‘Prioritization of Regional Strategic Sports’ for what its internal resources, as well as regional actors, must complement strengths and work in synergy to develop selected sports related with the georeferencing (altitude/s) conditions of the region, which are actually the sports with the highest probabilities to achieve elite

sport success.

The study shows how sport management theories and models can be put together and adapted to the particular context of developing countries as it is the case with the ‘High Performance Training Center’ of Ecuador. The combination of those elements provides a basis from where sport managers can improve their sport organizations, specifically, elite sport facilities. Moreover, the application of theories and models are part of strategic management, also, in the case of developing countries, where resources to develop sport are limited, it is necessary to be strategic on understanding, analyzing and coordinating those resources in order to develop sport according to own capabilities. The results show the importance of learning from developed systems and models but also highlights the importance of finding an own way to develop sport systems according to the social, economic and cultural reality.

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**Keywords** : High-performance, Elite-sport facilities, Management, developing countries

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# **Chapter 1. Introduction**

## **1.2. Background**

We may have something, but what really matters is how efficiently we make use of it. Ecuador is considered to be a developing country. Such a statement is directly related to limited economic resources. Despite this situation, the sport is constitutionally considered as a fundamental factor for the integral human development in Ecuador. Furthermore, the elite sport has been prioritized by the government to the extent that important policies regarding elite sport have been implemented to promote its development. Even though there are certain restrictions, Ecuador has the sporting potential and valuable resources, which can work efficiently to achieve higher results in elite sport.

Ecuadorian government invests in Elite Sport Development (ESD) more than any other area of sport. One of the most important governmental elite-sport projects is the ‘High-Performance Training Centers’, which operate as a public institution. It was created in 2014 and it has five complexes around the country which provide: sporting facilities, sport science services and equipment, accommodation, and food for national and international athletes. In an interview with the High-Performance

Training Centers (HPTC) CEO Johana Castillo, she stated that the centers represent a public investment of 240\$ million USD (Quizhpe, 2018). (HPTC) were created to contribute to the development of the nation's sport, especially the elite sports sector.

As we can see, public funds are invested to achieve success in elite sport in Ecuador. However, and particularly talking about the High-Performance Training Centers, the goals which are targeted have not been achieved yet. If sport venues lack effectiveness, it means that an economic and political problem for the sport will occur, especially when they are financed by public money. Accordingly, these training facilities are under the pressure of achieving objectives which are focused on the success of elite sport in the country.

Measurement of elite sport success is usually based on competition results. Thus, it is understood that success' indicators are the same for all countries despite the different process behind those results. In this case scenario, developing countries have a disadvantage when compared with the developed ones in terms of economic resources, science and technology for elite sport development. Small or developing countries should not stress on reaching the world's top positions; mainly because of the massive gap in resources between them and the developed ones. However, it does not mean

that small countries cannot achieve success in elite sport in specific events, disciplines or modalities. For example, Cuba and Ethiopia are small and not wealthy nations. However, they used their resources strategically and efficiently which led them to succeed in specific elite sports.

Many studies about elite systems have been trying to find the factors that determine success in elite sport. De Bosscher, Bingham, Shibli, Van Bottenburg, & De Knop have identified and classified those factors. They consider that meso-level factors, which involve sport policies and politics, are key elements to achieve success in elite sport because it is possible to influence or modify them.

Defining public policy. Jenkins W.I. (1978) suggested that public policy is “a set of interrelated decisions taken by a political actor or group of actors concerning the selection of goals and the means of achieving them within a specified situation where these decisions should, in principle, be within the power of those actors to achieve.”

Jenkins’ definition highlights three fundamental aspects, a) the interrelatedness and interdependence nature of decisions. Meaning that decisions are part of a sequence of decisions, thus, cannot raise from an isolated view (Turgeon & Savard, 2012). b) The political actors, whose governmental involvement reflects power and policy influence (Houlihan &



Green, 2005). And c) The achievement of goals and the identification of the means to achieve them (Turgeon & Savard, 2012).

In this research, it is taken into account the importance of policies about training facilities as a key factor to achieve success in elite sport. It is worth to emphasize that Ecuadorian public sport policies aim to succeed in elite sport and the government is providing support to reach it. Therefore, the next step is to understand the current situation of the (HPTC) from elite sport constituent's perspective, and then determine strategies for the centers to become real contributors for the development of elite sport in Ecuador.

Precisely in developing countries, where resources for sport development are limited, it is fundamental to implement strategic sport management to optimize the use of those resources while achieving success in elite sport.

### **1.3. Research Question**

The main research question that this paper is addressing: **How the 'High-Performance Training Center' can become a key factor to achieve success in elite sport in Ecuador?**

## **1.4. Research purpose**

### **1.4.1 Purpose of research**

The purpose of this research paper is to analyze the role of the (HPTC) (elite training facilities) of Ecuador as a key factor to achieve success in elite sport.

### **1.4.2 Main objectives**

In order to reach the main purpose of this research, three main objectives need to be achieved:

To understand the current situation of the (HPTC) in Ecuador in terms of elite sport development.

To analyze the key resources of the (HPTC) in order to identify a competitive advantage.

To suggest strategic policies for the (HPTCs) which will reinforce the factors that lead to successful elite sport in Ecuador.

## **1.5. Significance**

Elite sport success has been considered as a valuable resource for achieving non-sporting objectives for different organizations and governments in particular. Elite sport is well-thought-out as a strategic tool to extend government's ideologies because of its high social impact,

consequently, it represents an important political issue for governments.

Jean-Loup Chappelet and Emmanuel Bayle consider that the governments' interest in sport has increased because it became a socioeconomic phenomenon which affects the population significantly (Chappelete & Bayle, 2005).

In recent times elite sport success shows an approach toward benefits like national 'feel good', positive economic impact and diplomatic relations. And, in order to get those benefits, governments have recognized that they had to guarantee their athletes' successful performance (Houlihan & Green, 2005). Despite the fact that elite sport has its "dark side", it is still thought of as a good thing, particularly for young generations for whom athletic lifestyle represents a positive role modeling.

Elite sport is a priority for many governments, even in developing countries like Ecuador due to its social impact. Within this context, understanding the importance of elite sport and the available limited resources for its development, it is very fundamental to analyze and suggest how those available resources could be used strategically to achieve success in elite sport.

The significance of this research lies in the adaptation of international strategies to the Ecuadorian sporting context to achieve elite success. Three main elements lead the research: a) the analysis has a comprehensive approach taking into account the main constituents' perspectives, b) the research will focus on the strategic interaction, cooperation and complementation of available resources. c) The research method can further be applied in similar contexts at national or international level.

## **Chapter 2. Literature Review**

Literature review gathers relevant information from sources like books, articles, journals, and newspapers related to the topic. This chapter provides definitions and models about success in elite sport from global to local management strategies. It is divided into four sections:

The first section presents the globalization of sport and the international perception of success in elite sport as factors in implementing Strategic Management in Sport (SMS).

The second part presents Success in elite sport from studies about the factors that determine its achievement. The SPLISS Model (Sports Policy factors leading to International Sporting Success Model), developed by Veerle De Bosscher, Jerry Bingham, Simon Shibli, Maarten Van Bottenburg, and Paul De Knop is described here. Moreover, important concepts related to strategy are highlighted too, such as, ‘Benchlearning’, Prioritization of Sports and the concept of Competitive Advantage from a Resource-Based View.

Due to the scope of research, the third part is based in pillar 6 of SPLISS Model; Training Facilities, and presents a detailed description of the ‘State of the Art’ of the training environment based on Nikolai Böhlke’s

and Maja Neuenschwander's research. The section describes the dimensions and main elements that training facilities should have in order to contribute for success in elite sport.

The last section describes the organization (HPTC) of Ecuador as the subject of study. Important facts related to the available resources of the institution are taken into account. It also contains an overall of Ecuador's performance on the international elite level, mainly focused on Olympic disciplines and emphasizes the most successful events, sports or modalities.

## **2.1. Strategic Management in Sport**

To understand what Strategic Management in elite sport means, it is preferable to start with the globalization of sport and the international measurement of elite success.

Globalization of sport is one more consequence that social phenomena like migrations and conquests had brought to the human being. The "modern sports" invented in England and developed around Europe were spread around the world. The countries had joined the practice of global sports as well as the International Olympic Movement. Sport has become a global matter, but it has also developed the professionalization and research on its related areas where Sport Management is one of those.

According to Pitts & Stotlar (2013), sport management is “the study and practice of all people, activities, business, or organizations involved in producing, facilitating, promoting, or organizing any sport-related business or product”. Particularly in elite sport, sport management is a wise field in a competitive world where it is necessary not just to do something, but to do it better than competitors.

Morrison, Ricks, & Roth (1992a) suggest that two conditions make the implementation of global strategies necessary: one, direct competitors are using them to compete, and two, because performance can improve by pursuing global strategies when the industry has global structural characteristics. Nowadays elite sport is definitely a highly developed global industry, where sport managers need to adopt and adapt strategies in order to be internationally competitive.

Due to the globalization of sports, countries have implemented similar elite sport systems with slightly local variances (Storm, Nielsen, & Thomsen, 2016). It is generally perceived the increasing convergence of elite sport systems between nations. However, those slight differences become significant when they are the key to develop an advantage over the competitors

The global sport industry is well defined as the “global sporting arms race” by Oakley & Green (2001). It is characterized by a rising institutionalization of elite sport development, where governments invest strategically to produce sporting success (Truyens, De Bosscher, Heyndels, & Westerbeek, 2014). Within a globalized sport industry, D. Shilbury (2012) noted that the heart and soul of sport management is the competition. Thus, sporting success is the main goal of this competence between elite sport systems.

From the previous description, David Shilbury (2012) confirms that competition, therefore, is central to strategy. He explains strategy as a pattern of actions applied by managers to position an organization for competitive advantage, then, suggests that Strategic Management (SM) is about the managerial process of formulating pattern of actions and implementing them. Thus, Strategic Management in Sport is basically the formulation and implementation of managerial actions based on the environmental circumstances, which will give them a competitive advantage.



One of the environmental elements that influence the direction of strategies is the way how international elite sport success is perceived and measured indeed.

#### 2.1.1. International Measurement of Success in elite sport

Elite sport is an international platform where sporting results are linked not just with a particular athlete's performance but also associated with organizations' and even nation's performance.

To measure the international sporting performance of nations, international medals are considered an objective indicator. However, measuring international performance improvement only through the number of medals can lack precision. There are parameters related to an increasing number of tournaments and type of disciplines that need to be considered too. According to Rasmus K. Storm (cited by Storm et al. 2016), first of all, the number of international medals is not a real indicator because the number of international tournaments has increased significantly. Thus, an increased number of medals does not necessarily reflect a process of performance improvement. Also, an increased number of medals in "soft" disciplines, does not reflect performance improvement neither, because of the lower international competition standards that "soft" disciplines present.

From this rationale, the number of Olympic medals are the adequate mean to measure international performance due to its prestige and high difficulty to be won.

Even though the concept of Olympic Games is clearly stated in the Olympic Charter (2017) on its Chapter 1 Olympic Movement, article 6: “The Olympic Games are competitions between athletes in individual or team events and not between countries”. However, the Olympic tally is a liable indicator for the international performance of countries, which also shows the organizational performance of those in charge of success in elite sport.

Based on Olympic results, it is evident that winning predominance is linked to powerful countries. In a certain point, developing countries have a disadvantage when compared with developed ones in terms of economic resources, science and technology. Nevertheless, during the competition, athletes who belong to different sport systems compete under the same rules and their performance is measured under the same parameters. Thus, if success in elite sport is directly measured by competitions’ results, then, success’ indicators are the same for all countries despite the different process behind those results.

Globalized competition does not include globalized opportunities to prepare for it. However, as Robinson & Minikin (2012) noted, some countries have developed competitive advantage achieving Olympic success, although they lack the ‘determinant’ characteristics associated with success; the researchers brought the cases of Cuba and Ethiopia, as examples of elite-sport successful countries which are not populous or wealthy. The importance lies in finding the strategic way to develop the nation’s particular advantages in order to be internationally competitive, which in other words are Strategic Management of Sport.

## **2.2. Success in elite sport**

It is understood that success in elite sport is measured by sporting results in international competitions, especially in world championships and Olympic Games. Thus, in order to achieve it, many studies have been developed to find the determinant factors for success achievement.

According to B. Houlihan & M. Green (2005), for many years it was considered that economic prosperity and a large population were the determinant factors to ensure success at the Olympic Games. Later, the success-related variables increased to four: population size, economic development, duration of the International Olympic Committee (IOC)

membership, and the fourth one and very important indicator is a communist government. By the time of 2000 and 2002, the most successful nations belong from two defined groups: rich industrial countries or former/current communist countries, except for Ethiopia.

According to Green and Oakley, the rich and populous countries have ensured their athlete's development through the implementation of systematic, professional and science-based structures (as cited by Houlihan & Green, 2005). However, as De Bosscher et al. (2008) observes, 'factors such as population and GDP are becoming less good predictors of nations' performance in elite sport than they have been historically'.

#### 2.2.1. Factors to succeed in Elite sport

De Bosscher et al. (2008) provide a clear classification of factors for success in elite sport, with the distinction of three levels: 1) Micro-level: athletes and their close environment, 2) Meso-level: sport policies and politics and, 3) Macro-level: the social and cultural context people live in.

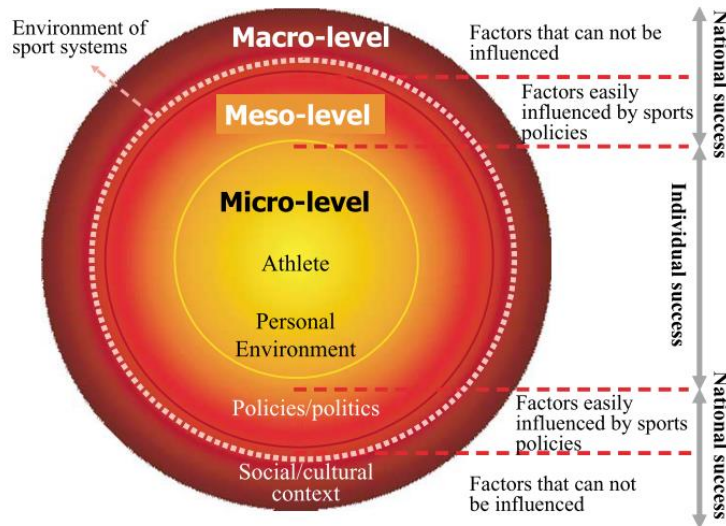


Figure 1. Model showing the relationship between factors determining individual and national success. De Bosscher et al. (2008)

Micro-level factors include aspects like genetic characteristics and immediate environment of athletes, some of those elements can be controlled while others cannot. Then, at macro-level factors are elements like economic welfare, population size, geographic and climatic variation, among others, and those aspects cannot be controlled by sport-policy makers and political system. The Meso-level factors are related to sport policies and politics, and those are the only ones that can be modified. Conceived of, in this way, strategic sport policies are a key mean to reach success in elite sport and are feasible to influence or change.

#### *2.2.1.1. Meso-level factors: sport policies and politics*

De Bosscher, Bingham, Shibli, Van Bottenburg, and De Knop (2007) studied the existing literature about policies and politics of sport in different nations. The researchers choose one group of studies as base to further develop the SPLISS model, thus, three important studies are highlighted starting with Larose and Haggerty who contributed defining nine categories of important factors thought to determine success, additionally, with their study, it was concluded that one model of factors leading to success does not exist. (De Bosscher et al., 2007)

Follows Clumpner who suggested three major factors responsible for international success: (1) financial support for training centers and personnel, (2) an ongoing integrated Olympic Sport system and (3) athletic talent. The study was expanded to a range of other factors: time for training, well trained full-time coaches, sports medicine back up, international competitions, early spotting of talent, access for all, good communication network and an unbroken line up through the system. (De Bosscher et al., 2007)

And finally, Mick Green and Ben Oakley (2001) studied elite sport structures from different socio-political systems: Germany, the Soviet

Union, Australia, Spain, France and the United Kingdom. The study indicates two key aspects among the different elite models, first of all, they found factors which reflect the trend of a uniform (global) model of elite sport structures. Second of all, the patterns and traditions of each nation that shape the sport system. According to Mick Green and Ben Oakley (2001) the common factors within the different systems are:

1. A clear understanding about the role of the different agencies involved and an effective communication network which maintains the system.
2. Simplicity of administration through common sporting and political boundaries.
3. An effective system for the statistical identification and monitoring of the progress of talented and elite athletes.
4. Provision of sports services to create an excellence culture in which all members of the team (athletes, coaches, managers and scientists) can interact with one another in a formal and informal way.
5. Well-structured competitive programs with ongoing international exposure.

6. Well developed and specific facilities with priority access for elite athletes.
7. The targeting of resources on a relatively small number of sports through identifying those that have a real chance of success at world level.
8. Comprehensive planning for each sport needs.
9. A recognition that developing excellence has costs, with appropriate funding for infrastructure and people.
10. Lifestyle support and preparation for life after sport.

The mentioned studies established a foundation for a model of factors as the reason for international sporting success. Later, the SPLISS model was the next step to explore the ‘how’ and ‘why’ this tendency towards uniform elite sport systems occurred.

From the findings of common characteristics to succeed in elite sport, the researcher wants to highlight two elements which are important for this study: The well developed and specific facilities with priority access for elite athletes, and the resources targeting in a narrow scope of sports. The second aspect of prioritization of certain sports will be elaborated more in the following point before proceeding to the SPLISS model.



Prioritization of selected sports. - The choice of strategic disciplines is the result of two processes, both complement each other to achieve elite sport success. One, 'resource targeting' is the selection of specific disciplines to be prioritized. This strategy has been adopted by many countries and it reflects a uniform (global) model of elite sport development.

The second process addresses the criteria to select particular disciplines. This process varies according to the local context. Two of the most important parameters under consideration are cultural and sporting criteria. Godfrey & Holtham (1999) suggested, 'A limited number of sports will have been identified, based on cultural and sporting criteria' (p. 11). Such patterns clearly vary from one nation to another.

According to Mick Green & Ben Oakley (2001), some countries choose to prioritize Olympic sports. For example, France, German Democratic Republic (GDR) and the United Kingdom. Many countries were focused on sports which have real chances to succeed in world competitions.

Some strategies are based in taking advantage from competitors' weakness, for example, the case of Australian strategy by targeting 'softer' medals, as expressed by Green & Oakley (2001), especially in some female sports. It is important to mention here that the strategy was conceived as a

cost-effective approach by Godfrey and Holtman (1999) who noted that 'Not only is it a matter of equality and likely to promote improved social attitudes but, as the former Communist countries showed, it can be extremely cost effective since many countries neglect women's sport'.

In the case of Spain, and according to Moreland R. (1992), as cited by Mick Green & Ben Oakley (2001), the country has used its resources effectively with precision on performance targets and analyzing key international data. As a result, 28 medals were predicted for Barcelona 1992, and 22 were achieved. Moreover, 17 medals were predicted for Atlanta 1996, and 16 were achieved.

From the previous description, it is understood that both external and internal patterns of elite sport can converge to develop strategies to succeed internationally. Two processes took parallel place: a) international influence: many countries adopt the policy of 'resource targeting' to prioritize selected disciplines, and b) national criteria to select the strategic sports. This depends on the nations' sporting and culture particularities. Some remarkable selecting criteria were focused on Olympic sports and the real probabilities to succeed on them.

In general, it seems like the countries which implement systems, structures, and policies by the hand of investing and distributing resources strategically will succeed in elite sport.

#### 2.2.2. 'SPLISS' model Sports Policy factors Leading to International Sporting Success

In 2002, the first study of Sports Policy factors leading to International Sporting Success 'SPLISS' started by a consortium group of international researchers. They were: Veerle De Bosscher, Jerry Bingham, Simon Shibli, Maarten Van Bottenburg, and Paul De Knop. The model was developed as a tool for policymakers and high-performance managers to benchmark and compare elite sport in different countries; in order to measure their organizations' performance and to evaluate national elite sport policies' effectiveness (De Bosscher, 2016).

The SPLISS model was tested by De Bosscher et al. in 2006 between six sample countries, using two methodologies: a) an overall sport policy inventory through interviews to obtain qualitative data. b) 'The elite sport climate survey' among athletes, coaches, and performance directors, obtaining quantitative data. The study provided a methodology to measure the effectiveness and competitiveness of nations with an important element,

which is the involvement of the main stakeholders of elite sport in the process. (De Bosscher, 2016)

Based on the multidimensional approach proposed by Chelladurai (2001) which provides the input, throughput, and output cycle, the SPLISS model identifies Critical Success Factors (CFS) which are grouped in nine dimensions which known as ‘pillars’ and categorized into two levels: inputs (pillar 1 . financial support) and throughputs (pillars 2. An integrated approach to sport policy development, 3. Participation base, 4. Talent identification and development system, 5. Athletic and post-career support; 6. Training facilities, 7. Coaching provision and coach development arrangements, 8. National and international competition structures, and 9. Scientific research). The output is the success in elite sport itself (De Bosscher et al., 2006). Please refer to figure N.2 which illustrates the 9 pillars of SPLISS Model.



practices which are copied and applied in any different context may not guarantee success. However, there are broad principles under a common framework that can be adapted to local circumstances. Accordingly, De Bosscher pointed out that the key challenge is to find the right combination of elements within a system and the processes that work best according to the context and culture. In other words, ‘benchlearning’ is seeking the best principles that work best in a particular context.

Moreover, the SPLISS 2.0 is considered important to find out not only the factors that lead to performance improvement across nations but also factors ‘that may deliver scope for nation-specific competitive advantage’ (De Bosscher, 2016). This simply leads to ‘Competitive Advantage’ which is an element of Strategic Management.

Robinson & Minikin (2012) define competitive advantage as: ‘the strategic advantage that one organization has over others that operate within its competitive industry’. Competitive advantage is strongly linked to the organization’s resources (Smart & Wolfe, 2003). Different studies apply the Resource-Based View, from which perspective is conceived that success is based on resources and particularly with the way an organization structures

and utilizes its resources to generate competitive advantage. (Wernerfelt, 1984)

Robinson & Minikin differentiate three types of resources in a system or organization. 1) Tangibles, like physical and financial. 2) Intangibles, like the capacity for development. 3) Human, like athletes, coaches and technical staff. Furthermore, an interesting approach was established by Robert Grant (as cited by Robinson & Minikin, 2012) who considers that if resources cannot be increased, they need to be leveraged and developed to improve competitive advantage. This can be done by concentration, accumulation, conserving or complementing of resources. The complementing approach is particularly relevant for this study.

As we can see, the model involves a wide group of factors and provides important concepts related to the success of a strategy. The following part will mainly focus on pillar 6 of SPLISS Model, Training Facilities, which will be complemented by another study which contributes with more detailed knowledge about training facilities.

### **2.3. Training Facilities**

The term ‘Training Facilities’ refers to sport facilities and infrastructure. Green & Oakley (2001) identified them as ‘well developed

and specific facilities with priority access for elite athletes'. Both researchers found this important factor as one of ten common characteristics between sport development systems which were previously described in point N. 2.2.2. According to De Bosscher et al. (2008), and in addition to sport specific training facilities, these institutes have administrative headquarters and strong links with education and sports medicine/science facilities.

Training facilities are in general the sporting infrastructures that athletes use for their preparation. However, each institution has particular features or status as public or private, no-for-profit or commercial, home for multisport programs or support for one specific sport, centralized or decentralized network, etc. Böhlke & Neuenschwander (2015) said that the characteristics of the scale of operation, type of organization and funding vary depending on each context and background.

#### 2.3.1. Success factors of training facilities

Several studies about training facilities have been done to find the appropriate characteristics of training venues, regardless of individual organizational differences. It is worth to mention that pillar 6 of SPLISS Model represents a base for the development of other important studies, as it



is the case for the research done by Nikolai Böhlke and Maja Neuenschwander (2015). In this way, we will describe the most important points of this specific pillar, and also the study of Böhlke and Neuenschwander will be described to reach a ‘state of the art’ elite training facilities. Both studies are considered important for the development of this research in a way that they complement each other.

First of all, and according to De Bosscher et al. (2006) pillar 6 contains sub-criteria (items), which are: a) Well-developed and specific facilities with priority access for elite athletes, b) Existence of adequate facilities for use by elite athletes – create centers of sporting excellence on a regional basis, c) Equipment prior for elite sport, d) Development of a national training center, e) Accessibility, availability and quality of training facilities; distance to training facilities and technical support.

For the operationalization of pillar 6, the following Critical Success Factors (CSF) were included by (De Bosscher, De Knop, Van Bottenburg, Shibli, and Bingham (2009):

CSF 1: There is a network of high quality national/regional elite sports center(s)/facilities where athletes can train under good conditions at

any time of the day with priority access, and also general services, access to sport medics, science and education and minimum travel time.

CSF 2: National coordination plan: facilities are recorded and the needs of athletes and coaches are known (existence of a database of elite sport facilities and their characteristics)

CSF 3-4: Travel time for athletes and coaches for training

CSF 5-10: Satisfaction of athletes and coaches with the quality and availability of training facilities and the cooperation of the technical staff.

Second of all, Böhlke and Neuenschwander (2015) have identified elements that constitute the state of the art of elite sport training facilities. They established five dimensions which their order is not related to their importance. It is important to mention that the authors prefer the name “training environment” as a generic way to refer to all the appropriate elite sport training venues. However, this research will utilize the name Training Facilities (TF). Following is a table with the key dimensions and main elements of (TE):

Table 1. Key dimensions and main elements of Training Environment (TE). (Böhlke & Neuenschwander, 2015)

<b>Dimension: Physical infrastructure</b>
The TE provides appropriate access to facilities and equipment of sufficient quality and quantity (for a specific sport).
The TE offers appropriate access to well-prepared and state of the art competition equipment.
The TE offers appropriate solutions to collate, analyze and feedback key data from training and competition.
The TE offers access to appropriate dining and accommodation facilities.
The TE offers access to appropriate lounges and resting areas (i.e. living rooms for athletes and coaches).
If not all infrastructure elements are available in a “one-stop shopping” set up, appropriate solutions are offered to manage the daily logistics between different venues.
The TE is, in general, easily accessible via private and public transportation.
<b>Dimension: Quality of the daily training process</b>
The coaches in the TE are highly knowledgeable and have a lot of technical competence.
The different coaches at the TE work as a performance focused and performance driven team.
During the daily training, athletes have enough “training partners” to push themselves.
The TE is so attractive that athletes from other countries and sport systems (would like to) visit it to experience training there.
In the TE, an effective, performance focused knowledge management and knowledge development system (and culture) is put in place.
<b>Dimension: Support Services</b>
The TE offers appropriate, balanced and targeted access to state of the art recovery interventions and modalities.
The TE offers appropriate, balanced and targeted access to core, state of the sport science support services.
The TE offers fast access to efficient solutions in case of medical emergency.

The sport science and sport medical support services are effectively integrated into the daily training process.
The technical quality of all sport medicine and all sport science support services offered in the TE, as well as the competence of the respective service personnel, is very high and continuously developed.
The TE offers access to research and development opportunities for athletes, coaches, and the service staff to continuously develop training practices as well as sport medicine and sport science support services.
The TE offers access to an effective lifestyle support program for athletes and coaches.
The TE offers access to sufficient opportunities to realize athletes' (and coaches') dual career plans.
The organization of and the access to all support services offered in the TE are effectively and efficiently managed.
Newcomers in the TE run through an effective induction process that makes it easy for them to "find their fit".
In the TE an effective, performance-focused knowledge management and knowledge development system (and culture) is put in place.
<b>Dimension: Atmosphere and culture</b>
Nationally and internationally, a TE has an image among athletes, coaches and managers as one of the "places to be" to become successful in a specific sport.
In the TE there is a clear performance mentality and winning mindset among athletes, coaches, managers, and the whole service team.
Thanks to the personality and leadership of the coaching team, the daily training is well supervised and carried out in a way that is motivating for the athletes.
In general, athletes, coaches, sport managers and the whole service team enjoy being in the TE.
In the TE and effective, performance-focused knowledge management and knowledge development system (and culture) is put in place.
<b>Dimension: Strategic positioning, development and security</b>
The TE and its long term development are anchored and represented in the strategic planning of the specific sport federation/national governing body (NGB), providing the TE a certain (financial) planning security.

The TE has a clear position in the athlete development pathway. It is clear what developmental stages athletes have to fulfill before they can start training at the TE and which steps they follow after leaving it.
Access to the TE, meaning the selection of athletes who train at the TE, as well as the recruitment of coaches and service staff who work there, is transparent, performance-focused and well communicated.
When athletes, coaches and service staff members leave the TE, they go through an effective exit process in order to manage their experience and knowledge for the further development and improvement of the TE.
The TE is positioned in the national development strategy of a specific sport federation's performance plan so the athletes from the region and from other national TEs would like to, and can, visit regularly to experience training there.

## 2.4. Ecuadorian Elite Sport and Training Facilities

Before starting with the description of elite sport in Ecuador, the researcher will mention some basic characteristics of the country. The Republic of Ecuador is a South American country located in the equatorial line and in the middle of the world. It is also ranked among the top 17 “Megadiverse” countries in the world because of its natural and cultural diversity(United Nations environment, 2014). Ecuador has four geographical regions: the Amazon Rainforest, the Highlands, the Coast and the Galapagos Archipelago.

The country's population is 16'778.899 million. Ecuador possesses different ethnics groups, these are Half-Blood (Mestizo) 71.9%, Montubio 7.4 %, Afro-Ecuadorian/Afro descendent 7.2%, Indigenous 7 %, White

6.1% and others 0.4 % (Instituto Nacional de Estadística y Censos. INEC, 2018).

The economy of Ecuador is mainly based on mining, agriculture, and fishing. The export of natural products represents the most important economic activity. Oil is the predominant product to export, followed by bananas, cacao and shrimps. The country has been the world's largest exporter of bananas for decades. In 2016 the GDP of Ecuador was \$98.6B and its GDP per capita was \$11.2k. (The observatory of economic complexity, 2016). Moreover, in Ecuador, the predominant age group is 25-54 years people: 39.59% of the total country's population. 27.08% are aged between 0-14 years old. Adult people over 55 years old represent 15% in total (Indexmundi, 2018).

Ecuador is considered a developing country. However, the government invests in sport since it is considered a right for the integral development of human being, and this is stated in the country's constitution. The investment of the Ecuadorian government in elite sport is significantly higher than other sport areas.

#### 2.4.1. Elite Sport in Ecuador

The objective of achieving international success in elite sport, especially the Olympics, has become a priority for many countries. Nowadays, it is visible that a governmental trend to work on elite sport development is taking place more directly and efficiently. This situation has required significant changes in national sporting organizations (NSOs) and national governing bodies of sport. Many countries distribute a significant amount of public money to improve success in elite sport. (Houlihan & Green, 2005).

Ecuador is not the exception, its government invests in Elite Sport Development (ESD) more than in any other area of sport. The country has two main projects to develop elite sport. a) The ‘High-Performance Training Centers’, b) the ‘High-Performance Project’. The athletes involved in the “b” project are those who basically use the high-performance training centers. Thus, there is an important link between both projects.

Elite sport development in Ecuador is highly related to the ‘High-Performance Project’ created by the Ministry of Sports in 2013. It covers elite athletes’ necessities, such as: competitions, sport equipment, salary for professional and economic stimulus for athletes. The program had operated

during the period from 2013 -2016 with a budget of 60'399.128\$ USD million, and 53'2\$ USD million are already approved for the period between 2018 -2020. Its goal is to achieve success in games which belong to the Olympic cycle and international competitions, and this is what different sport organizations are working on.

To understand the current situation of elite sports in Ecuador, the researcher will mention some relevant achievements specifically related to Olympic results. The country has two medals in the summer Olympic Games. Both were obtained by Jefferson Perez in Race-walking. One gold medal in Atlanta 1996 and a silver one during Beijing 2008. In Singapore 2010 Youth Olympic Games, Ecuador achieved a silver medal in Race-walking with Joel Villavicencio. In Rio Olympic Games 2016, the Ecuadorian team was represented by 38 athletes: 16 from Athletics (eight race walkers, six marathoners and two sprinters); four boxers, three from Judo, three weightlifters, one gala swimmer and two open water swimmers, two cyclists, two wrestlers, one from canoe, one from equestrian, one from rowing, one from shooting and one from triathlon.



From a basic analysis, there are important patterns about the type of sports where Ecuador presents successful achievements. Accordingly, two main groups can be distinguished:

1) The Olympic medalists, as well as, the 44.7% (17 athletes) from the total participants of Rio 2016, are endurance athletes (Race-walking, marathon, triathlon and open water swimming) who belong to the highland region of Ecuador (more than 2.300 meters above sea level) and belong from a Half-Blood (mestizo) ethnic group.

2) The other important group is formed between Judo, Weigh lifting, Box, and Wrestling. It represents 31.6% percent (12 athletes) from the total Rio participants. The majority of them are Afro-Ecuadorian people.

#### 2.4.2. High-Performance Training Centers of Ecuador

According to Packianathan Chelladurai (2014), the term “organization” can be defined as a social entity which essentially includes four elements: people, specialized functions, coordination and a common goal. The ‘High-Performance Training Centers’, as an organization, represents one of the most important governmental elite-sport projects in Ecuador.

It is important to understand the particular characteristics of the organization. Moreover, basic concepts like the objectives of creation, legal and financial status of the institution are necessary to be mentioned.

The High Performance Training Centers (HPTC) is an Ecuadorian public company (In Spanish, it is: Empresa Públicas Centros de Entrenamiento para el Alto Rendimiento CEAR-EP). It was officially operating on the 27th of August 2014 by the Presidential Decree No. 439, which also establishes the institutional objectives of creation:

- a) To administrate the high-performance training centers.
- b) To provide integral services to national and international athletes in order to improve their athletic performance.
- c) To develop scientific-sports research focused on projects related to athletic performance. Precisely, strategies and tactics that lead to the development of high-performance training centers.
- d) To provide optimal conditions in order to develop high-performance athletes and spot new talents.

The same decree determines that the Highs Performance Training Centers are regulated by the Organic Law of Public Enterprises - OLPE (In

Spanish: Ley Orgánica de Empresas Públicas-LOEP). In article 40 from this law, it is stated that some public companies are subsidized by the state to provide public services with a predominance of social profitability. According to the above-mentioned law, the HPTC is an institution which works with principles of social profitability and financial profitability (among others) to be reinvested for the benefit of the society. (Ley Organica de Empresas Publicas LOEP. Ley 0, 2009)

The institution has five sports complex (centers) around the country which provide: sporting facilities, sport sciences services/ equipment, and accommodation/food, for national and international athletes. In an interview with the (HPTC) CEO Johana Castillo, she stated that the centers represent a public investment of 240\$ million USD (Quizhpe, 2018). (HPTC) were created to contribute to the development of the nation's sport, especially the elite sports sector.

Based on Packianathan Chelladurai (2014) theory, the researcher will classify the organization from the following criteria: profit orientation, source of funding, prime beneficiary and employee-customer interface (refers to the interaction between them). According to these four parameters, it can be said that the (HPTC) is a no-for-profit organization, financed by

public funds, whose prime beneficiaries are the athletes. Moreover, the interaction with the customers are Maintenance-interactive (with venues services) and Personal-interactive (with sport science services provided by experts).

#### 2.4.2.1 The Centers

The five centers are located in different cities across three of the four regions of the country. The city and the respective province of each center are: 1) Rioverde, Esmeraldas, 2) Carpuela, Imbabura, 3) Duran, Guayas, 4) Cuenca, Azuay, 5) Macas, Morona Santiago.

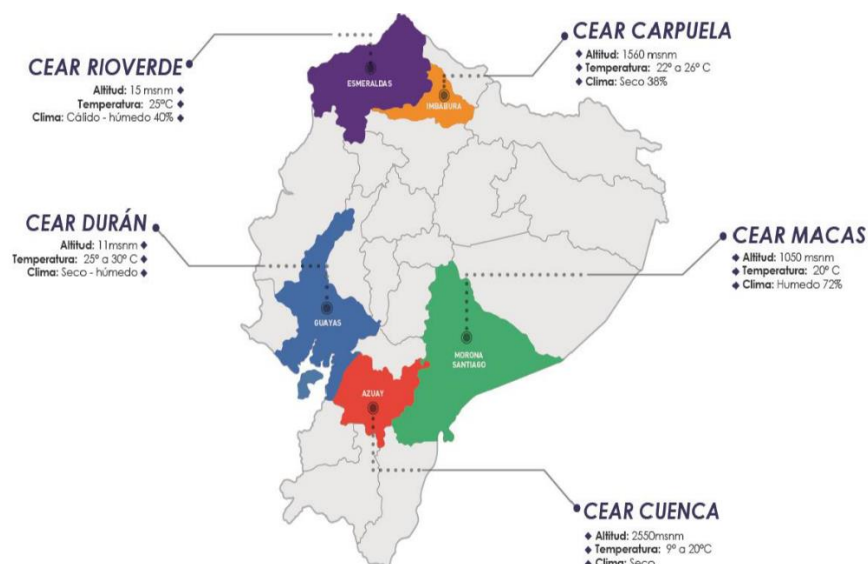


Figure 3. Location of (HPTCs) in Ecuador. (Empresa Publica Centros de Entrenamiento para el Alto Rendimiento CEAR-EP, 2016)

The centers have different characteristics regarding the geographical and climatological aspects. As well as, different services and venues. They mainly provide Sporting Venues, Sport Science Services, and General Services. The following table shows the services each center provides.

Table 2. Services provided by the High-Performance Training Centers

<b>High-Performance Training Centers of Ecuador</b>						
<b>Services</b>		<b>Centers</b>				
		Rioverde	Carpuela	Duran	Cuenca	Macas
Sporting Venues	Athletics	x	x	x	x	x
	Judo	x	x	x	x	x
	Taekwondo	x	x	x	x	x
	Weighlifting	x	x	x	x	x
	Boxing	x		x	x	x
	Karate	x		x	x	x
	Table Tennis			x	x	x
	Wrestling	x		x	x	x
	Chez			x	x	x
	Football	x	x		x	x
	Futsal	x	x		x	x
	Basketball	x	x		x	x
	Handball	x				
	Beach Volley	x			x	
	Volleyball	x	x		x	x
	Baseball/Softball	x				
	Swimming			x	X	x
Sport Science Services	Sport Medicine			x	x	
	Physiotherapy			x	x	
	Psychology			x	x	
	Nutrition			x	x	

	Dentist			<b>x</b>	<b>x</b>	
General Services	Accommodation	<b>x</b>	<b>x</b>		<b>x</b>	
	Food	<b>x</b>	<b>x</b>		<b>x</b>	
	Meeting Rooms	<b>x</b>	<b>x</b>		<b>x</b>	
	Conventions Center	<b>x</b>	<b>x</b>		<b>x</b>	
	Parking Lot	<b>x</b>	<b>x</b>		<b>x</b>	

X: existing services, Empty cell: not provided service.

#### 2.4.2.2 Objectives of Establishing the (HPTC

Going back to the annual reports regarding the accomplishment of the (HPTCs) objectives, the researcher found that there are four objectives from which three are directly related with the development of elite sport and elite athletes. And these three objectives are a) To provide integral services to national and international athletes in order to improve their athletic performance. b) To develop scientific-sports research focused on projects related to athletic performance. Precisely, strategies and tactics that lead to the development of high-performance training centers. c) To provide optimal conditions in order to develop high-performance athletes and spot new talents.

The annual reports are available for the years 2015, 2016 and 2017. The documents reflect a change in the operational focus of the organization. According to the 2015' report, effectiveness is justified by the purchase of sporting equipment with international standards. Moreover, the

establishment of the multisport schools for grassroots. (Empresa Publica Centros de Entrenamiento para el Alto Rendimiento CEAR-EP, 2015)

Moving forward to the 2016's report, the institution was in charge of the administration, implementation, and operation of national elite sport projects. The budget was the highest when compared to the other years. During this period, effectiveness is described as the amount of resources invested to cover the necessities (competitions, equipment, salaries, coaching, sport science, health services, studies, etc.) for elite athletes and athletes with elite perspective. (Empresa Publica Centros de Entrenamiento para el Alto Rendimiento CEAR-EP, 2016)

In 2017, the achievement of objectives is focused on the provision of services. Which basically are: sport-science services and infrastructure, accommodation and food and finally, sporting venues. (Empresa Publica Centros de Entrenamiento para el Alto Rendimiento CEAR-EP, 2017)

Along the three periods, the institution has not operated in a stable way. Continuously trying to accomplish the objective of creation by the implementation of different projects with different target markets. There is not a clear managerial performance focused on achieving the institutional objectives. Going back to 2017, it is clear that the general services were the

only thing provided, and sport science services and research were not.

However, the indicators which are used to describe the achieved tasks are invalid when compared to the institutional objectives.



### **Chapter 3. Methodology**

The previous chapter has provided a comprehensive understanding of strategic management, success in elite sport, training facilities and the centers of study depending on the existing literature. Following, the methodological considerations to be applied for this research will be explained in this chapter.

The main research question that this paper is addressing: **How the ‘High-Performance Training Center’ can become a key factor to achieve success in elite sport in Ecuador?** Qualitative research method was applied in order to answer this question.

First of all, the researcher selected the respondents according to their professional profile, and the sample included: elite athletes, elite coaches, managers linked with the HPTC at national and regional level and the sport science director of the center. The different groups represent the main constituencies of the organization.

The researcher created a questionnaire based on studies which were developed by Nikolai Böhlke and Maja Neuenschwander (2015) about the ‘state of the art’ of training facilities. Moreover, based on the Critical success factors of SPLISS pillar #6 by De Bosscher et al. ( 2006). The

questionnaire is divided into five dimensions and 13 sub-dimensions. The questions allowed the researcher to explore the organization from its internal and external elements.

With the information provided from the main constituencies' perspective, it is possible to understand the current situation of the HPTC. Thus, key findings will show the available resources from where a competitive advantage could be developed, and according to the previous points, the strategic policies will be proposed.

The following procedures which were implemented during the research methodology are described as:

### **3.1. Research Method**

To analyze the role of the (HPTCs) of Ecuador as a key factor to achieve success in elite sport, the researcher applied qualitative research method. This research is a case of study, for which the data collection was obtained through in-depth interviews with open-ended questions.

In-depth technique involves conducting intensive individual interviews to explore the perspective of respondents on a particular idea, program, or situation. It shows their thoughts concerning operations, processes, and outcomes. (Boyce & Neale, 2006)

The interview has a semi-structured style because the researcher prepared a set of questions in predetermined categories; moreover, the open-ended questions allow the respondents to extensively express their thoughts with free-form answers (Farrell, 2016).

The purpose of the interviews is to find out the elements that the research question looks for. Which is gaining insight into the complex management of training facilities and to seek the opinion from the main constituencies and experts.

Boyce & Neale also determine six steps to follow for conducting research using in-depth interview method. 1) Plan, it is basically to identify the stakeholders and which information is needed from whom.

2) Develop instruments, preparation of an interview protocol, in other words, the guide of the interview. It lists the questions or issues to be explored during the interview.

3) Train Data Collectors, in this case, the researcher is the only data collector. However, training interviews will be made as Skill-building exercises on interviewing and interpersonal communication.

4) Collect Data, conducting the interviews with the participants and then summarizing key data and verifying the information given as necessary.

5) Analyze Data, it is necessary to transcribe, review and analyze data. Look for patterns or themes among the participants' responses and group them.

6) Disseminate findings, where the researcher should write an appropriate report and solicit feedback from interviewees in case of been necessary.

### 3.1.1 Respondents/stakeholders

First of all, the research sample was selected from the main 'constituencies', as Connolly, Conlon & Deutsch (1980) defined. These constituencies are groups within the organization, as well as, groups that belong to the environment. In this research three groups are identified:

Athletes/coaches

Managers (regional and national authorities)

Sport science directors/experts

The criteria to select the sample is: a) the individuals must belong to national elite sport, from their different roles. b) The individuals must be related to the (HPTCs) in Ecuador as customers, employees or partners. c) The individual should be associated with Olympic Sports (because Olympic sports have been the most important among international elite sport). Interviewing between three to four people from each group, a total of 9-12 were planned.

Second of all, (HPTCs) are five. However, the present research had focused on one of them in order to develop deep analysis according to the regional context of the center. The research model can be applied to the rest of the centers in the future. The selected center is number 4-Cuenca; because it is the center with the highest demand and it is where the administrative headquarter is located. This means that fundamental activities and decisions take place there.

### 3.1.2. Instrument: Interview Guide

The interview questions explored the current situation of the centers in five categories which are based on the state of the art training facilities proposed by Nikolai Böhlke (2015) and Maja Neuenschwander. This is

complemented with the Critical success factors of SPLISS pillar 6 by De Bosscher et al. ( 2006). The Interview questionnaire is in Appendix 1.

Table 3. Instrument: Interview Guide

<b>DIMENSIONS</b>	<b>SUBDIMENSIONS</b>
1: Infrastructure	<ul style="list-style-type: none"> <li>• Sport Venues</li> <li>• General Services</li> <li>• Organization and daily logistics</li> </ul>
2: Quality of the daily training	<ul style="list-style-type: none"> <li>• Uniqueness for training</li> </ul>
3: Specialized Services	<ul style="list-style-type: none"> <li>• Sport Science Services (SSS)</li> <li>• Integration of SSS to athlete preparation</li> </ul>
4: Internal and external environment	<ul style="list-style-type: none"> <li>• Human resources</li> <li>• National and international image</li> <li>❖ Integral services</li> </ul>
5: Strategic positioning and development	<ul style="list-style-type: none"> <li>• Financing</li> <li>• Orientation</li> <li>• Functioning</li> <li>❖ SWOT</li> </ul>

Qualitative research is considered to be the most adequate to obtain deep, valuable and perhaps unexpected information. In the case of applying quantitative methods, it could be limited to obtain the same quality data.

### 3.1.3. Training the data collector

In this case, the researcher was the only data collector. Pilot (training) interviews were made as Skill-building exercises on interviewing and interpersonal communication as well as a tool to define the questionnaire.

### 3.1.4. Data collection

For this research, eleven semi-structured interviews with open-ended questions were applied among main constituencies: four elite athletes, three elite coaches, three managers and one sport science director.

The researcher used phone calls to arrange time with the participant coordinating time difference between Korea and Ecuador, Germany and China where the participants were temporally.

The interviews were in the local language Spanish through Skype video calls because of the countries' distance. The interviews were recorded and saved, each interview held from 45 to 60 minutes.

Then interviews were transcribed and coded in the same local language. The transcriptions resulted in a total of 130 pages.

### 3.1.5. Data analysis and disseminate findings

After the interviews were transcribed, the whole material was coded thematically according to the key dimensions and main elements of training facilities previously described in Table 1, and the items and critical success factors from the pillar 6 of SPLISS model.

The semi-structured interview has already developed themes and subthemes, and the information provided by the respondents will bring the main elements within those themes and will show their conditions and interrelationships. The researcher organized, selected and summarize the most relevant data ‘findings’ and has translated them to English.

## 3.2. Validation method

### Triangulation & Member Checking

#### 3.2.1. *Triangulation*

For this study, the researcher used triangulation and member check to validate the collected data. In this section, the researcher will briefly explain these two used methods.

Sometimes, triangulation might involve the use of different practices, such as observation, focus groups and individual interviews. These form major data collection strategies for much qualitative research.



However, focus groups and individual interviews have some weak points; both of them are interviews of a kind, which results in methodological flaws. Yet, their distinct characteristics result in individual strengths. Guba (1981) and Brewer & Hunter (1989) agree that the application of different methods in harmony compensates for their individual limitations or flaws. Moreover, takes advantage of their respective benefits. Whenever possible, supporting data and/or evidence may be obtained from documents in order to provide a reference to and help justify the attitudes of the selected research sample. Furthermore, to verify specific details that participants have offered.

Triangulation may also involve the use of a wide range of sources. This can be treated as one way of triangulating via data sources. Within this case scenario, individual viewpoints can be verified against others. Thus, a rich picture of the attitudes, needs or behavior of those in the sample may be constructed based on the contributions of a range of people. Van Maanen propels the exploitation of opportunities “to check out bits of information across informants” (1979).

Finally, triangulation can be applied through the participation of people from other entities in order to reduce the effects of particular

perspectives from the organization's inside; when similar results come from different sources the finding's credibility increases (Shenton, 2004).

Perceptions of people from different organizations may be applied to provide the diversity that supports Dervin's concept of "circling reality", which she defines as "the necessity of obtaining a variety of perspectives in order to get a better, more stable view of 'reality' based on a wide spectrum of observations from a wide base of points in time-space" (1983).

According to the theory, the researcher interviewed different groups related with the organization. Stakeholders, such as elite athletes and coaches; policy makers, including the regional manager of the center; and finally, policy implementers represented by the sport science director. In addition to that, the sample included external stakeholders from the organization with which the HPTC cooperates, like a board member from the national sport government (Secretary of Sport) and the president of the regional federation of sport (FDA). Moreover, the information provided was also examined by documental analysis especially within legal and technical aspects. In this way, triangulation was applied as method for data validation through the analysis of multiple sources in order to find consistency among the different data sources.

### *3.2.1. Member Check*

Guba & Lincoln consider member check as the most important method that can be used to support a study's credibility (1985). According to Shenton (2004), checking the data's accuracy can take place "on the spot" in the last part of data collection dialogues. Research sample may also be asked to read or double check any transcripts of dialogues in which they have participated. In this case, the stress should be on whether the interviewees consider that what they said match what they actually mean. For example, if an online call took place, the articulations themselves should have been accurately captured – at least.

Moreover, member checking should involve verification of the researcher's emerging theories and as they were formed during the interviews. This method has been employed by Pitts (1994) and it is recommended by Brewer and Hunter (1989) and Miles and Huberman (1994). Whenever possible, interviewees can be asked if they can offer reasons for certain patterns observed by the investigator. Van Maanen stressed the importance of developing such a formative understanding. Van Maanen wrote: "analysis and verification... is something one brings forth with them from the field, not something which can be attended to later after the data are collected. When making sense of field data, one cannot simply

accumulate information without regard to what each bit of information represents in terms of its possible contextual meanings” (1979).

Based on the theory, the researcher constantly reviewed the information with the interviewees. This was applied in two ways, first, checking the reasons or causes of any statement made by the respondents. And second, after reviewing dialogues when theories were emerging, the interpretation of key information was checked with interviewees in order to confirm the context and point regarding the statements. Hence, member checking was applied as a second method for validating the data collected.

### **3.3. Research Timeline**

In order to conduct this study within the given period of approximately 10 (Ten) months, the researcher arranged the timeline as follows:

Research proposal submission: topic background, literature review and methodology (January – February 2018), 2. Research methods preparation (March-July 2018), 3. Research proposal approval by the committee (August 2018), 4. Research data collecting (September 2018), 5. Research analysis (October 2018), 6. Thesis final submission (November

2018), 7. Thesis Oral Defense and complete thesis submission (December 2018).

<b>RESEARCH TIMELINE (2018)</b>												
	<b>J</b>	<b>F</b>	<b>M</b>	<b>A</b>	<b>M</b>	<b>J</b>	<b>J</b>	<b>A</b>	<b>S</b>	<b>O</b>	<b>N</b>	<b>D</b>
Research proposal submission: topic background, literature review and methodology.	<b>X</b>	<b>X</b>										
Research methods preparation			<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>					
Research Proposal approval by the committee								<b>X</b>				
Research data collection									<b>X</b>			
Research analysis										<b>X</b>		
Thesis final submission											<b>X</b>	
Thesis Oral Defense												<b>X</b>
Complete Thesis Submission												<b>X</b>

## Chapter 4. Results

While analyzing the 11 interviews which took place, deep complex and valuable information were obtained regarding the internal and external situation at the HPTC. Interview questions were categorized into five dimensions and 13 sub-dimensions, which respectively correspond to themes and sub-themes.

In this part, the results will be described according to each theme and subtheme. The respondent's answers are identified as following: athletes (A1, A2, A3, A4), coaches (C1, C2, C3), managers (M1, M2, M3), and sport science director (SS1)

### 4.1. Theme 1: Infrastructure

#### 4.1.1. Subtheme a. Sport Venues

##### *a1. Inter-institutional dependence /deterioration/lack of international standards*

The High-Performance Training Center (HPTC) of Cuenca has a dependent relationship with the regional federation 'Federación Deportiva del Azuay' (FDA). (FDA) is in charge of grass roots sport development. The majority of sport venues are the property of that organization. However, the partnership was established by an Inter-institutional cooperation agreement;

since The HPTC started operating and the center is actually built inside FDA's sport complex. This partnership is considered beneficial. First of all, the center is seen as an important factor in the development of sports in the region because it motivates young athletes to reach elite levels. Second of all, the HPTC area of sport science can work with talented young athletes from FDA. Finally, the relation is a way to optimize economic resources by complementing each other.

M3: "The center is part of FDA (...) it is perfect that the center is in the city of Cuenca and the coordination for venues availability can be managed efficiently (...) the center represents the final stage for the sporting development of our young athletes (...) this motivates our young athletes and promotes sport massification?? in our region (...) the center can provide sport science assistance to our talented kids, which is something we lack (...)" A1: "in my opinion, the cooperation with FDA is good because there is no double expenses for infrastructure"

Many sport venues are deteriorating and they lack international standards for competing. However, their conditions are good enough for training.

M3: "Our infrastructure is useful to train but it is getting old. To improve its conditions, it is necessary to invest two million US dollars (2m\$) and it also requires maintenance". C1: "...we lack venues which fulfill international standards". M2: "...the center has the infrastructure. However, and nowadays, it doesn't

have international standards”.

The utilization of venues which belong to FDA is prioritized for grass roots. When national elite teams ask to use them, sometimes there is a conflict between the groups. Elite athletes, coaches and sport science experts need more flexibility and availability of the venues to work properly. Both institutions coordinate the utilization but there are no operation policies to run the process. Such a process takes time and it is not efficient. Since the availability of sporting venues have to be coordinated between two organizations, it is necessary to improve the efficiency within procedures.

M3: “they ask to use the venues and we provide it all ways when it does not conflict with our kids’ practices (...) there is a rule... when a venue is required, it has to be processed by the architecture department?? and the technical-methodological department in order to book it for the requester”

C3: “that is a problem, we can use the venues because of good relations with other coaches, but between DPTC and FDA it is difficult, it is necessary to send an official request-letter which requires another letter and that letter has to be almost “signed by the president!””.

## *a2. Good venues*

There are good routes for long distance sports. Nearby the center (Approx. 15 min away) there is a 13km – recreational - route alongside the river. Moreover, and within the city perimeter, there are long-distance routes



chosen by athletes to train while passing through the different landscape. Long distance routes, a velodrome, a semi-Olympic swimming pool, an Olympic swimming pool, athletics' track and combat-sports hall. These mentioned are the best and the most used facilities. All of them provide adequate training conditions for athletics, triathlon, cycling, swimming and combat sports.

A3: "a couple of km away from the center, there is a route where many athletes are training (...) if he/she is a marathon runner they would be happy! Because 800 meters away, there is the "Ruta Recreativa" with 13 km trail to run on non-stop... that is perfect!"

A4: "there are good loops for long distance training (...) near to the city, which is considered part of the training spaces, you find alternative routes that in my case I use them to change the training environment and landscape (...) being an elite athlete, it helps me to dispel my mind and reduce daily training stress. It is a positive factor... especially for long distance training"

M1: "The (Jefferson Perez) track is opened (...) the athletes use our services, then go and train there without any restrictions (...) we have our own semi-Olympic pool and gym (...) in the case of swimming, it is useful for training, but for competence?? Elite training??, it is necessary to use FDA's Olympic pool. However, for triathlon training, it is perfect (...) I think that the disciplines which the center can offer at best are athletics, triathlon and swimming"

A2: "...it is good enough for training, no need for something else (...) for example, inside the complex there is a velodrome (...) also the venue for martial arts, so in that sense, it is very close for many sports practices"

The manager does not know about the training- routes but is aware that national and international athletes find them by themselves with help of locals. However, and during the interview, it was realized that mapping the routes and providing information and facilities would be a service to offer, due to the high demand from long-distance athletes who want to use the center.

M1: “To locate and map the places where they can do such kind of training would be very beneficial”

#### 4.1.2. Subtheme b. General Services

##### *b1. Good quality services*

Accommodation: the service is considered “excellent”.

A4: “in the case of accommodation, I can say that the rooms are the biggest I have ever lived in when comparing to different high-performance centers with accommodation. That is good because the athlete feels comfortable (...) In this sense, the HPTC is great”

Food: the service has improved its quality. It used to provide the same meal for different athletes from different sports, and it was a different provider every time due to the public purchasing system since the center is a ‘public company’ and has to follow public purchasing policies. Now it is better, it is trying to offer specialized and flexible menus: designed for

athletes with permanent nutrition assistance and flexible for athletes from different sports so they can manage their menus' composition.

A4: "About the food service, the center lacks logistics that could orient us more regarding the nutritional aspects (...) good nutrition is fundamental for our preparation, it assures the recovery processes and good performance during training sessions." A2: "about the food service, I think it is not really good because it is not a buffet, the menu is already set, and I have seen different people as providers"

M1: "Now we have a permanent service... it is based on the athletes' calorie needs. The menu has different ingredients and the athletes take what they need"

C3: "the nutritionist's job can be ruined if you don't have a good food service, but at the HPTC, the coordination between the nutritionist and food service exists."

## *b2. Legal status affects the operation*

Accommodation capacity is (287 people). This makes the operational costs very high because the demand is low when compared to what is offered. And due to the legal status of the institution, also being a "Public Company", it is a must to be auto- financed. Consequently, administrators try to increase utilization percentage in different ways; even if they are not focused on elite sport development.

M1: "Even if the center is opened for grass roots, the problem is that it is a public company, and this makes things difficult. The center will never give an investment return and you will not see profits for the institution since public companies are required to do

so”.

SS1: its accommodation capacity is debatable because it requires huge efforts to increase utilization. And to justify the investment, administrators lose sport development orientation while trying to increase sales.

Food service has improved. However, it is facing difficulties. As ‘Public Company’, any purchasing process must be done through the Public Purchasing System. The mentioned system is not adequate for sport in terms of time and flexibility which meet athletes’ requirements.

M1: “this part has improved a lot, however, there are still difficulties due to the legal conditions”

### *b3. Need for service improvement*

Access and transportation service: Some routes for long distance training and other sport venues are not inside the sport complex and the center does not provide transportation for that. It only provides a contact for any transport company but without anything official. Athletes are aware of that. Even though the center’s location has access to public transport, it is necessary to have the transportation system from sport venues; in order to save time after training sessions and use it for recovery.

M1: “the center does not have transport service so we provide the contact for taxis or vans and then they coordinate directly, the center is not in charge of it (...)”

SS1: “It would be good to have a transportation system integrated between venues and the center, but we don’t have it because it is not considered as something important (...) this is part of the wrong management model that administrators have”

A3: using public transport is difficult, to go to the pool. It takes 45 minutes and by private transport it takes 15 minutes (...) an elite athlete tries to optimize his time between venues (...) after the training you feel fatigue and you need to recover either with massages, therapy, food or regenerative training and the time until the recovery is applied influences a lot”

Recreation/entertainment areas: The center lacks resting and entertainment areas. For athletes and coaches, it is fundamental to have entertainment and resting areas inside the center because it helps their psychological status during the intensive training camps.

M1: “about entertainment areas the center is pretty deficient”

A1: “We are not training machines and sometimes we need to disconnect (...) it has a special meaning in a high-performance center for the athletes because sometimes there is too much pressure and frustration from your daily routine... that shot of entertainment keeps you psychologically stable”

#### 4.1.3. Subtheme c. Organization and daily logistics

##### *c1. Athletes’ and coaches’ needs*

It is common that the administrative staff doesn’t know about the specific needs at elite sport level. Moreover, users’ feedback collection

methods are not taking place in order to achieve improvement. That is the reason why the needs are not properly determined and managed. There is a lack of knowledge about sport logistics and there are no professionals/experts with an international profile to offer proper service for foreigners.

SS1: “administrative areas are not competent, in our context, there is no specialized administrator for sport facilities knowledgeable about the particular and special elite athletes require (...) there is no professional for international relations who can interact with foreign customers, in order to understand their needs and later adjust services according to their feedback”

C2: “I consider that the weakest point of the center is the lack of professionals prepared to administrate a high-performance center. They don’t have the vision about what it means (...) the simple fact of not speak English is very limiting (...) for example, the Canadian triathlon coach came several times complaining about the water temperature and she couldn’t deliver the athletes’ needs properly (...) it is necessary to ask for a feedback about the service during the training camps in order to solve any issue but nothing of that happens because they don’t know what they have to do, the center must have qualified personnel who knows sport dynamics”

Sport science services schedule: Sport science professionals have office hours and this doesn’t work with elite training reality; their schedule should be more flexible according to athletes’ needs. It shows orientation weakness within the organization.

A4: “It is complicated having office hours for sport science areas, many times we finish training sessions after 5 pm and in that moment everything is already closed”

C3: “This kind of departments should not have office hours (...) for me, as a coach, it is fundamental to use the evening time for rehabilitation and recovery because if I have to wait until the next day. I lose one day and it means like a month is wasted”

### *c2. Unutilized resources*

There is sport science equipment without use due to the lack of professionals able to handle such equipment.

C2: “If you want to give a service, first of all, you have to make sure that your staff are qualified enough for such duty, for example, an expensive and very sophisticated machine was unpacked for years in some of the laboratories of biomechanics because nobody knows how it works”

### *c3. Legal status affect the operation*

Usually, simple problems are immediately solved. However, when there are inconvenient which require purchasing items, the processes are bureaucratic and not fixed on time; even when they are related to basic services like warm water provision or food. The cause of inefficiency from the administrative perspective is the legal status of the institution. It is a ‘Public Company’ and it has a Public Purchasing System. Such negative/insufficient process threatens the center’s image.

C3: “There are things that managers cannot control because the process in Ecuador is too bureaucratic, and the public purchasing system is inefficient (...) For example, they couldn’t provide warm water for three days, a small – yet - big mistake. When my athletes’ bodies are vulnerable, they can catch a cold before competing and that’s all (...) in the case of the center which is trying to improve its image, this kind of inconvenient is very damaging”

## **4.2. Theme 2: Quality of daily training**

### **4.2.1. Subtheme d. The uniqueness of the center for training**

#### *d1. Georeferencing: altitude/s*

The different constituencies indicated that the characteristic that would satisfy local & international athletes and coaches, and will encourage them to use the center is the altitude. The center is located in the city of Cuenca which is located 2,550 meters above sea level.

Also, the center is located near other two zones that present alternative altitudes: a) National Park “El Cajas”: the place is well known for its natural attractiveness but also because it is frequently used by athletes to train because of its altitude. It is located 4,000 meters above sea level (masl), and it takes 40 minutes by car from the HPTC to get there. B) “Yunguilla” Valley: the place is located at 1,100 meters above sea level, and it takes 45 minutes by car from the HPTC. And in case training at sea level



is necessary, it is possible to reach the coast side of the region within 3 and a half hours. Athletes and coaches consider this characteristic as the most important and attractive. They can apply training or evaluation sessions at different altitude points within one day, and their recovery and resting sessions in the altitude of Cuenca; in order to obtain the training effects they look for.

A4: “there are alternatives... if you want to train in higher altitude you just go to El Cajas”

C2: “For training, the georeferencing is not only Cuenca at 2.700 meters, but also there is “El Cajas” at 4.300 meters, Yunguilla at 1.100 meters. Sport doctors and coaches of different modalities in the same day can apply different tests and analysis at different altitudes and that is not easy to find everywhere in the world.”

M1: “In triathlon, it is perfect, foreigners come and train in the altitude in El Cajas and they find it really beneficial”

M3: “One advantage is to be at 2.550 meters above sea level and the option to go at 4.000 meters is easy, and within three and half hours you could be at sea level in the coast”

## *d2. Key sports and modalities*

Altitude is beneficial. Especially for long distance disciplines, but also for another type of disciplines that need hypoxic training.

SS1: “the altitude has great effects in endurance disciplines (...) for example, the best open-water swimmers (10 km) are from this region, and talking

about Olympic race-walkers (20 and 50 km) too. However, there are other types of disciplines with great results too, like BMX, mountain bike, etc”

C3: “For the South American games in Cochabamba (...) we alternate between Cuenca and El Cajas and it had great results, our athletes were fighting around 8-9 minutes and they finished in good conditions when their opponents needed to be carried on stretchers and with oxygen (...) the best athletes are in Azuay but we have to recognize that the region altitude is a big advantage”

### **4.3. Theme 3: Specialized Services**

#### **4.3.1. Subtheme e. Sport Science Services (SSS)**

##### *e1. Fundamental areas and equipment*

The existing areas are good. They are the basic areas to provide assistance for elite sport athletes: sport medicine, physiotherapy, nutrition, psychology and dental services. To reach higher standards, it is recommended that the sport science services must include other services.

A2: “I have been using all the services... nutrition, psychologist, sport doctor, biomechanic, physiotherapist, and I consider it is spectacular because they are all supporting the athlete preparation”

A3: “I think the existing services are the basic when talking about high-performance center needs”

M2: “the center has good service of sport science (...) I think this aspect has improved a lot”

## *e2. Lack of complementary services*

Recovery (regeneration) methods: it is a basic and determining factor for the proper process of training. Athletes and coaches consider it easy to implement with minimal investment. Especially to do temperature contrast therapies and the center already has some devices which can offer that.

A2: “there are no sophisticated recovery methods, simple things can be implemented: ice baths for contrast therapy, a whirlpool tub is not expensive, but we don’t have it and that is keeping us behind other centers in the world (...) this is extremely important for every athlete after training and we don’t have it in the center of Cuenca”

A4: “there is good equipment but what has been pending for several years are the recovery methods as complementary services, like whirlpool tubs, ice bath, cryotherapy (...) this is fundamental to bring for athletes, because physiotherapy is not enough, it is always necessary to have alternative recovery methods; this is taking us one step behind many centers”

C1: “recovery methods are basic yet fundamental and the center does not provide them, that takes us away to reach basic standards for elite sport level (...) regenerative methods are underestimated in the center, nowadays, regenerative elements has become even more important than training loads, an elite athlete is subjected to extreme training loads to develop his high performance and that demands extreme attention on regenerative processes”

Biological laboratory: service is only provided for athletes linked to the FDA but there is no permanent service; it could be provided through an agreement with private laboratories.

C2: “it is mandatory to have a laboratory as complementary service, or a connection with a private laboratory for tests”

### *e3.Under-developed research and statistics*

There is a lack of evidence (or it is inaccessible) of research or databases about the athletes assisted in sport science areas. Coaches consider that the lack of evidence is part of deficient work within the sport science areas.

A3: “I think that the center does not have databases, they do not have a backup for previous tests, and if I go today, the professionals don’t know what I did the last year (...) If now comes a new professional and tries to check the last year’s results, it would be possible to establish new parameters for my preparation, but now there is no information available so it means starting everything again.

C1: “Research is not at the standards of elite sport, it requires lots of scientific research but here we don’t control anything (...) for example, the data of 50, 30 or 20 race-walkers I can do a whole analysis of the Ecuadorian athletes which would help my current and future athletes’ preparation (...) for example, if I want to see the medical history, even though it is confidential, or databases with the sport doctor they don’t have it or they don’t show it”

M1: “I think that we are far away from the objective,

the experts are providing services in sport science but I have never seen something about investigation projects in this area (...) neither databases or statistics about Ecuadorian athletes”

#### 4.3.2 Subtheme f. Integration of SSSs to athlete preparation

##### *f1. Integration*

In general, it is stated that there is an integration of the SSSs with athletes’ preparation. As well as an integrated work between the different areas.

C2: “With sport science professionals I had a fantastic team”

C3: “There is integration with athletes’ preparation, I was feeling excited, I was the coach who knows everything about the athletes and there was everyone even the physiotherapist collaborating, debating and giving us feedback about what the athletes need, that is how it should always be”

##### *f2. Divergence SS professionals’ and coaches*

The integration was possible with the majority of athletes but not with everyone due to divergences between coaches and sport sciences’ professionals, there is a debate between the academic preparation VS field experience.

SS1: “The sport science is integrated with athletes’ preparation but not with all of them; when I say the athlete it is coach-athlete because the athlete makes

what the coach allows and the majority of coaches do not have enough knowledge to understand what sport science professionals do”

C1: “For example I took my athlete for a VO2 max and I told the doctor that his results will be between 65 to 70 and effectively that was the result, it is because I’m in the field with them, I see them I know them, these things are basic (...) but the sport doctor gets his degree with a six month diploma and does not really know what is sport”

Another point is the high rotation of personnel which brings different perception about sport science services, it will vary according to the quality of professionals of that period. This point will be described in detail in the next point N 4.1.2.

#### **4.4. Theme 4: Internal and external environment**

##### **4.4.1. Subtheme g. Human resources**

###### *g1. Professionals’ expertise/ divergence*

Within Ecuadorian context standards, the level of expertise is considered high, but not in comparison to international level. It is considered that sport science professionals are very well qualified and selected.

A1: “I think that professionals from sport science are very well selected, but administrative I am not that sure”

M2: “well, the area is directed by a great sport doctor

nowadays, the only one with two Olympic medals, I think we have good improvements in this part”

C2: “With sport science professionals I had a fantastic team (...) we had several protocols developed which will be useful for future elite athletes”

A2: “It is difficult to find highly qualified experts in our environment, however (...) with research they can develop themselves and the center indeed”

On the other hand, there is a negative perception regarding administrative staff.

C2: “I consider that the weakest point of the center is the lack of professionals prepared to administrate a high-performance center, they don’t have the vision about what it means”

C3: “things are solved from administrators to administrators, however, I think that the process is too bureaucratic”

## *g2. Administrative and budgetary instability affects the operation*

Administrative and budgetary issues affect employment stability; the institution is in a period of transition where the legal, economic and administrative status for the future is not clear. This condition does not allow to hire professionals for permanent positions.

M1: “this high rotation is because of the institution’s instability as a consequence of the government issues (...) that is why it is not possible to hire professionals for long period”

A4: “seems like every two years the professionals have to change and it means we have to adapt to a new and totally different system”

Rotation: There is a high rotation of sport science professionals which affects: databases creation, development of research and the development of professionals' expertise. At the same time, this labor instability affects athletes' preparation. Athletes and coaches need consistency; they cannot trust new professionals or methods every time. It is considered that sport science professionals should have a minimum period of four years, corresponding to the Olympic cycle.

C2: "With sport science professionals I had a fantastic team (...) we had several protocols developed which will be useful for future elite athlete (...) but everything disappeared, everything went back to zero because the center changed the professionals (...) there is no stability to allow the professionals to really develop their profession, (...) the professionals have to focus on keeping their jobs instead of developing sports"

A2: "Sport science services are spectacular, but what I consider to be negative is the change and rotation of personnel (...) it is a whole team that knows the athlete and I prefer stability in this sense (...) the last month they changed the nutritionist and came a new psychologist and in less than one week was fired, thus, there is no consistency in order to develop a good process, they should stay long periods with us"

A3: "I was used to a specific physiotherapist and his type of physiotherapy, now I have a new one (...) it means starting again from zero until he knows me and what I need"

C1: "Sport demands long-term process, and that needs the presence of the professionals all that period because they know the athlete"

SS1: personnel rotation should not exist,



professionals should be hired minimum for one Olympic cycle”

*g3. Shared mindset/ divergence*

Professionals of sport science have an “elite performance” orientation.

A2: “I had contact with the sport science personnel, and a clear focus to reach performance improvement was visible. Also, providing the best conditions to the athlete was visible too”

A1: “Professionals from sport science are focused on the athlete, but other staff don’t really know about athlete’s situation”

A4: “I believe that nowadays everybody is looking to the same goal. The professionals I work with know clearly that my objectives now are the Pan-American and Olympic games. With the administrative staff, I don’t have much contact but I consider that sport science professionals’ focus is shared by the whole organization”

M2: “I believe that the current professionals are people passionate for sport, however, authorities who decide on the institution’s future have a totally different focus”

On the other hand, it is perceived that administrative staff is oriented mainly towards economic resources’ generation and not on sport development. It is a consequence of the financial problems at the institution and its legal status.

C1: “When the centers became a public company, it was the worst condition ever; the centers had to

generate mainly money”

M1: “In general, the mentality now is focused on the economic part, to keep the institution alive but with profit. The main goal is the economic aspect and sport development is secondary”

SS1: “The mentality or focus is on volume, they are trying to fulfill the centers just in order to justify the investment. It starts in administrative level and is spread until sport science area where the experts become people evaluating a high quantity of athletes in order to justify investment instead of looking for the quality of them”

#### 4.4.2. Subtheme h. National and international image

##### *h1. Image improvement*

Although the center is not considered yet as "the place" to develop an elite athlete of a certain sport, the center is acquiring a good image internationally because of its altitude characteristic (previously detailed in point 2.1.1.) and low costs. It is considered cheaper than other centers.

A2: “For example, in the center of Sierra Nevada the price is around 100, 120 dollars per day, and HPTC in Cuenca is around three times less (...) training camps in altitude are available in Mexico and the United States, as I remember now, and the cost of Cuenca is very convenient compared with those”

C2: “For example, the UCI beneficiaries came because they knew about the conditions of altitude and cost we offer (...) to keep a national team, for example in England it costs 10 times more than the cost here including flight tickets, so it is convenient for such kind of teams”

M1: “In relation to the altitude, the center of

Colombia, Coldeportes I think it is a competitor... but I believe in terms of costs our center has an advantage”

#### *h2. Focus on attracting international customers*

It is also perceived to focus on attracting foreign athletes and not to increase the use of the centers by national athletes in the first instance. It is considered that a program should be done in order to attract more regional and national athletes to use the centers. Later, those athletes will expand the center's image since they have international exposure.

C1: “The HPTC is for the country (...) but here they want to fulfill it with foreigners, and no, first you have to be full of national athletes”

C3: “Bring our national athletes to experience the center's benefits, then they will be our ‘ambassadors’ and will promote the centers at international level. Who do you feed first of all in your house? Your sons of course, but here the sons of the national sport are not considered the main goal and it has negative effects”

### **4.5. Theme 5: Strategic positioning and development**

#### **4.5.1. Subtheme i. Financing**

##### *i1. Financial sources*

The dependency of public funds/government: There is a lack of economic resources and dependence on public funds is the only financial source.

A4: “A threat is that we always depend on government support to see how many people it is possible to hire, it is always about the amount of money available”

A2: “the political issues that the government wants to close the high-performance center... what if they definitely do it? Recently, there were several changes within the ministry of sport, so this instability is a threat”

M2: “the economic situation is difficult. Even though the president of the republic has guaranteed that there will be funds for sport... but nowadays the future of the HPTC is uncertain, we don’t know if the next year there will be the same budget which this year was already cut by almost one million dollars”

Main constituencies consider this dependence as a threat and suggest that it is necessary to have an alternative economic source such as private companies. It could be managed with government policies’ support, for example associating the companies’ contributions to sport with tax exemptions, as it is done in other countries.

C3: “We are a rich country, from whatever point we have everything but something has to happen and we will not have just two Olympic medals or dreaming with a third but we could be close to getting one, if we involve other actors not just athletes and the government but companies which really want to support sport (...) I know cases where the sport does not depend on the state, the best way is with strategic alliances with the private sector. For example, Brazil”

C2: “A percentage of the private companies taxes could be invested in sport (...) if we could generate the policies that allow the HPTC to be nourished by private capital, the national sport would have enough money”

Another way is through inter-institutional agreements for cooperation to support critical areas like complementary services in the area of sport science. The case of laboratories was described in point 3.1.2.

A second dependence is a relationship with the secretary of sports. The HPTC receive public funds but it is the Secretary of sports (recently changed from Ministry of Sports) the entity which determines how the resources are provided for the HPTC and how it has to be managed. However, the centers do not belong to this organization. In the case of becoming part of the secretary of sports as one institution, it could be beneficial in order to have an own budget.

M1: “Being a ‘public company’ we receive public funds but we are not ruled by governmental policies, institutions which belong directly from central government have their own budget, for example, we actually depend on the ministry of sports and that money we have to justify in services and we cannot allocate funds to improve the infrastructure or human resources as we need, it is a limitation (...) if the ministry of sport decides to cut money, even though it is for their athletes benefit, they can easily do it, so the institution doesn’t work without them”

C2: “I think the centers will be better if they belong to the secretary of sports, although I have always considered that private management is much better for this kind of organizations”

The center of Cuenca shares budget with the four more centers nationwide, several of which have no demand. The institution should select the centers with the highest demand and the best chance of development.

M1: “it would be better to belong to the secretary of sports, it will probably happen. The best way is if the center is managed directly by the government and gets its own budget so it can focus on sport development. However, it is necessary to select which centers are actually competitive at an international level”

## *i2. Regional network*

There are regional entities working with the HPTC, as is the case of the regional federation of sports Federación Deportiva del Azuay (FDA). It is considered possible to reach better results setting common goals between both institutions.

M3: “it is necessary to work together to find economic sources together, which could be whether public or private, in order to invest in our regional sport venues”

Universities are another key element. Working together with both institutions could receive benefits to develop their objectives. Research development for both, students from sport-related careers could use facilities and get the experience working with athletes, coaches and sport science professionals, while athletes could have opportunities to study.

A1: “in areas related to sports it could be good because students will learn from the real field (...) I think it is possible to do, it just requires a bit of organization”

C1: “There must be programs for development (...) for example if we work with universities, the director of sport medicine can send with me physiotherapy and biochemistry practitioners for my eight marathon runners, that is how they become professionals (...) a physiotherapist is not formed by books... also the coach”

C2: “the center has plenty of space in terms of infrastructure, so it should provide area for professionals formation in sport, it could be for future coaches, instructors, etc. who will improve their knowledge with the teams and professionals that come to the center (...) open the opportunity for students to understand what it means working within elite sport level, medicine or any related area. You give them the chance but also generate income at the same time”

M1: “It is simple, just an inter-institutional covenant with the universities, the center is a sport residence too, so maybe some students could live here as well as athletes could study (...) working with universities means an opportunity for the centers”

At national level the main actors linked with elite sport are the national federations, at the same time there is direct relation with the athletes that are part of the ‘High-performance program’.

C2: “a strength is that the national federations that do not have infrastructure nowadays they have the chance to concentrate on the centers, it is a factor to improve sport performance.”

#### 4.5.2. Subtheme j. Functioning

##### *j1. Legal status*

It is considered by managers a priority to change the legal status of the institution. Currently, it has the figure of ‘public company’, such type of public organizations must generate enough profit in order to be auto-sustainable, and the condition is determined by law. Even though it is understood from the main constituencies part that the center must produce income for its improvement, it must be also understood from policymakers that the center’s main objective is sport development and not the economic resources generation.

M1: “I think that the center has potential but not being managed as a public company (...) being a public company pushed the administration to only looking for economic income, when it is clear that the sport, in reality, has no economic return”

C1: “When the centers became a public company... this was the worst condition ever, the centers had to mainly generate money. A high-performance center will never generate profit, they require investment because they are developing people (...) what is the income of a high-performance center? It is the social impact, and there is where the state is winning.”

SS1: “The HPTC should not have become a public company (...) the budgetary situation should be based on the fact that it is an investment in sport and social area and it will not bring an economic return at all”



## *j2. Management model*

Considering that Ecuador is a small country with limited economic resources and infrastructure, the specialized services of the center should focus on specific sports. At the same time, it is emphasized that the aspect that the centers should be open to many disciplines in order to continue functioning.

A1: “If there was less number of sports it would be possible to focus better on each sport (...) ending up with quality and not quantity”

A2: “Considering that the center of Cuenca is quite new, we should open the doors for every type of athletes; however, according to the infrastructure we should focus on specific sports”

C2: “we are a small country, with a broad range of sports and low qualified experts and the mistake is to think that the volume is enough and we are not thinking on raising the country’s level to a higher status in sport”

### **Operative plan**

According to the main constituencies’ perspective, the centers should have a “Dual Operational Plan”. Having two elements with specific goals: the first one is the economic resources’ generator which will provide general services for every kind of customers linked to sport. And the second is the elite sport developer, which provides the specialized services for

selected sports. It is important to promote the centers according to international events.

C2: “within the same functioning, the center should have different operative plans, which allows you to identify high and low seasons to know when to apply the plan B. Nowadays the center should be offering services because the next year is pre- Olympic year”

C3: “It should be not exclusive but should offer the best conditions for certain sports, for example, swimming, if you have the pool then look what else does swimming needs and focus on it to be specialized on that, or judo if you have the Coliseum, etc. (...) To be strategic, we should focus on giving the best conditions for some sports”

M2: “I think the service should be open, generalized because many sport just need altitude for a while and then they move to sea level and other than that would need to stay the whole year in altitude, so it should be flexible in this sense”

#### 4.5.3. Subtheme k. Orientation

##### *k1. Strategic sports*

From the respondent's view, there are specific sports which should be developed as a priority. They should be developed based on parameters previously described (1.1.2. and 2.1.2.) as available sport venues and uniqueness for training that the center can offer. Another highlighted points are the historical and present high results on certain sports. All these elements show a regional development vision. The sports and modalities are

Athletics, combat sports, triathlon, swimming and cycling, specifically for their modalities of long distances (endurance) and those which involve hypoxic training.

### Combat Sports

C3: for me, definitely combat sports. For example, it has anaerobic physiological demand.”

C1: “this could be a great center for the development of combat sports because it doesn’t require too much infrastructure, we already have the gym, and we have space... we just need some equipment”

M2: “let’s remember that one of our strategies for South American Games in Cochabamba was to concentrate many sports for 21 one days in Cuenca, we are talking about racing and combat sports”

C2: “we should not forget about the combat sport that we are able to provide infrastructure, good athletes and good coaches too. With a narrow vision if we have to choose two sports we should look for athletic and combat sports (...) It is important to start with 2 or 3 sports and then expand, get a worldwide positioning in the development of athletics and combat sports, I think there are a lot of customers that would like to come”

### Athletics – Swimming - Triathlon

C2: “our georeferencing is a unique place to develop athletics (...) athletics is a key element, it should be one of the most important focus to work on”

SS1: “The center should be open to many disciplines give a couple of them as emblematic disciplines (...) if you see the best swimmers are in this region, the best race-walkers are in this region, so by default we

should focus on improving that kind of sport venues to become Top in the country, we have the best athletes and they will attract many people from other countries too”

M1: I think that the center of Cuenca is attractive for the disciplines of athletics, triathlon and swimming because of its geographical conditions, so, if the center would focus more on those disciplines there will be higher sport development and the center could become the benchmark in elite sport”

### Cycling

C2: “there are also another sports which demand a lot of hypoxic training like cycling (...) we should look for sports which do not demand specific infrastructure as the first step like cycling, we have good routes for it”

## 4.6. Additional Findings

### Integral services

Expectative for integral services are mainly: a) Sport venues for training, b) Accommodation, good quality nutrition, transport and recreational zones, and c) Sport science services.

A1: “first of all, I see the infrastructure where I am going to train, then for me, it is fundamental where to rest, the second more important is the food but considering the term integral, it also includes recreational options”

A4: first of all to give me enough facilities to train and to recover properly with professionals of sport sciences. I pay attention to basic stuff, where to train

and recovery conditions”

C1: “from the most basic which is a bed, to good food and sport science assistance”

C2: “an athlete cares about nutrition quality. If he/she has the necessary conditions to move from one place to another when and how she needs. To have access to laboratories tests too. Zones for recreation because there is where the athletes recover physiologically.

### SWOT analysis

At the end of each interview after have explored the whole organization, the last question asked to list the elements they consider as strengths, weakness, opportunities and threats (SWOT) of the HPTC. The respondents coincide in the following points, which were already supported by quotes in this chapter.

- Strengths: a) Geographic location (Altitude), b) Low costs, and c) Emblematic sports in the region.
- Weakness: a) Sport venues in deterioration, b) Administrative and budgetary instability, c) Lack of high qualified sport administrators, and d) Legal status as a public company.
- Opportunities: a) Strategic alliances, b) International sporting events, c) Attract national athletes and through them reach international image.

- Threats: a) South American competitor in Colombia, b) Political influence, c) Administrative and economic dependence of government.

## **Chapter 5. Discussion – Analysis**

The main research question which is being addressed is: **How the ‘High-Performance Training Center’ can become a key factor to achieve success in elite sport in Ecuador?** In order to answer this question and fulfill the research purpose, three objectives have to be achieved. The research purpose is ‘To analyze the role of the (HPTC) (elite training facilities) of Ecuador as a key factor to achieve success in elite sport’, and the main objectives are ‘To understand the current situation of the (HPTC) in Ecuador in terms of elite sport development’, ‘To analyze the key resources of the (HPTC) in order to identify a competitive advantage’ and ‘To suggest strategic policies for the (HPTCs) which will reinforce the factors that lead to successful elite sport in Ecuador’.

First of all, the researcher will describe the findings obtained from the data collected. Furthermore, and in order to find out the main objectives proposed for this study, the researcher presents a three-phase analysis’ process to follow.

### **5.1. Findings**

Figure N. 4 shows the themes and subthemes with the corresponding findings. Each point will be described thoroughly.

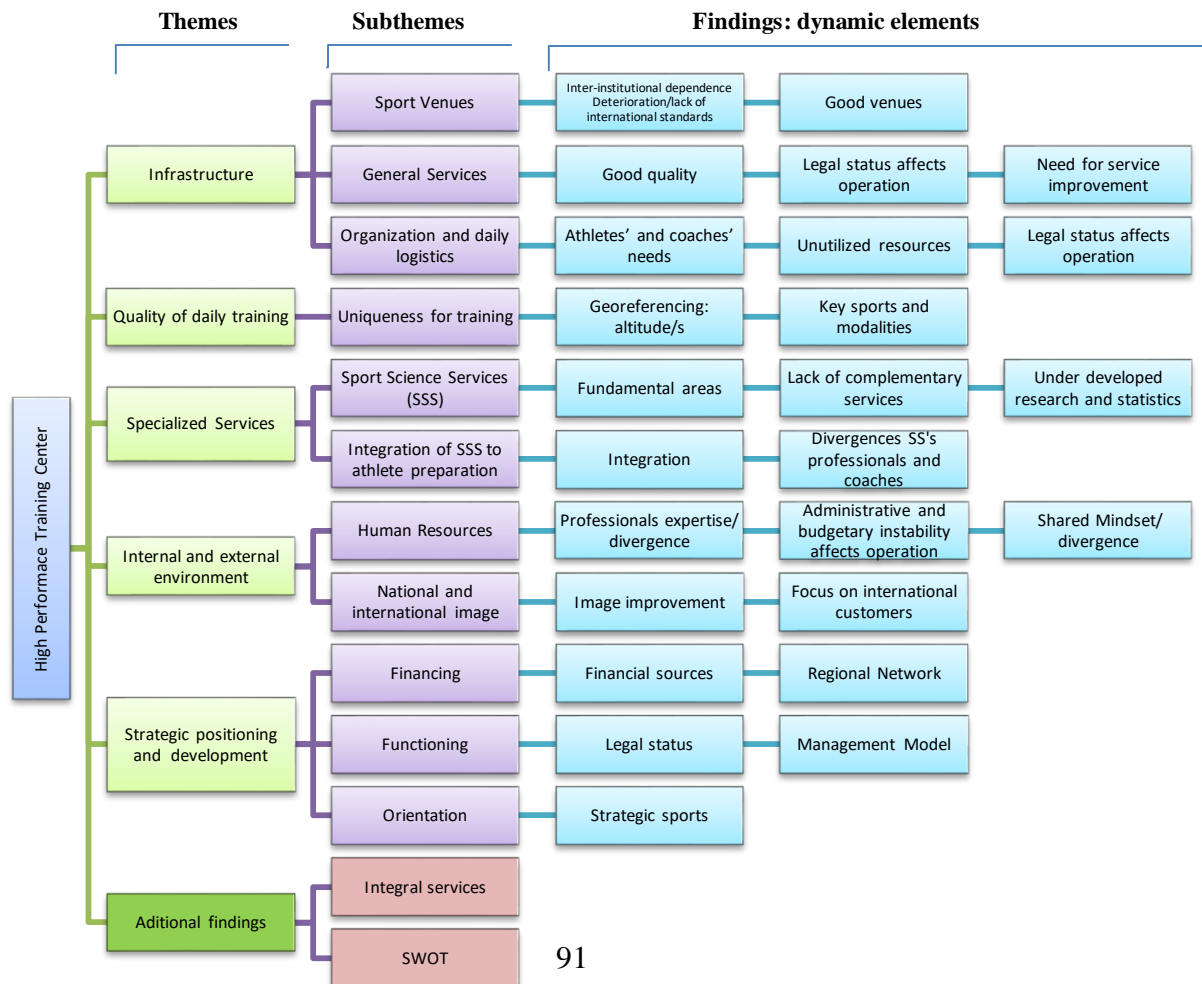




Figure 4. Research themes, subthemes and findings

In order to provide a clear understanding of the findings, the researcher is presenting a summary in this part. The researcher would also like to highlight that the research is focused on elite sport. All the qualifications are based on the high standards of elite sport, and they are also compared to it globally. The subject of the study is a dynamic system where its elements interact and become interdependent. The findings provide a deep understanding of the internal and external elements of the HPTC and their relationship.

The first theme is (infrastructure), and its subtheme is: (sport venues). The subtheme shows that the sport venues conditions are good for training but requires improvement in order to reach international elite standards. The HPTC depends on the regional federation ‘Federación Deportiva del Azuay’ (FDA) to provide sport venues. However, there is a positive vision about this inter-institutional cooperation. Administrative procedures and policies between both organizations should become more efficient in order to satisfy customers’ expectations. The best training arenas are the

outdoor routes for long distances training, the combat sport coliseum, the velodrome, the track and pools (semi-Olympic inside the center and an Olympic one at FDA's sport complex). These venues offer adequate conditions for athletics, triathlon, cycling, swimming and combat sports. HPTC doesn't provide transport between venues and the administrators do not know about the outdoor routes or any alternative arenas that can be utilized for training. However, it is necessary to pay attention to such kind of details in order to improve the quality of the services.

The subtheme (general services) shows that services such as accommodation, food and the central location of the center have high quality and have improved during the last period of time. The services which need to improve are the transport between venues. It should be provided by the centers. Moreover, the recreational areas should be added to the center; because they play an important role in psychological recovering. Training load at elite sport level is high and the psychological aspects must be taken into account.

While talking about the subtheme (organization and daily logistics), a lack of knowledge about sport logistics from managerial personnel was spotted. This is the reason why athletes' and coaches' needs are not fully satisfied. The situation is visible in the sport science services' attention schedule. It conflicts with the preparation routine of elite athletes. In the same way, there are sophisticated devices without use due to the lack of professionals who are qualified to operate them. From management perception, many of the specific athletes' and coaches' needs cannot be satisfied because of the legal status of the center being a 'public company'. It does not allow them to operate properly, particularly, the system of public purchase which is inefficient for the dynamic nature of sport.

The second theme is (quality of daily training), and its subtheme is the uniqueness of the center for training. This uniqueness is brought up by the characteristic of Georeferencing, the geographical altitude of the city of Cuenca, where the center is located at 2.550 meters above sea level. Also, the alternative altitudes near to the city: a) National Park "El Cajas" with an

altitude of 4.000 meters above sea level. b) “Yunguilla” Valley: the place is located at 1.100 meters above sea level. c) The Coast region, when athletes need sea level, it takes 3 and a half hours to get there. This is considered near. This condition allows sport professionals to implement different training plans focused on different physiological effects. The sports that use this advantage at most are sports which require endurance and hypoxic training.

The third theme is (specialized services), and its subtheme is (Sport Science Services) (SSS). This theme shows that the existing areas are fundamental services that a high-performance center must provide in order to be considered as one. However, there are basic complementary services of recovery methods and a laboratory for blood test analysis which the center must have; this missing point is taking the center away from elite sport standards. It is obvious that the lack of statistical databases regarding elite athletes and scientific research is present. The lack of research can be improved through an alliance with universities. Working with universities would be beneficial for both institutions to develop their objectives. Hence, students from sport-related careers could use facilities and get the

experience while working with athletes, coaches and sport science professionals, while athletes could have opportunities to study.

The instability in hiring sport science professionals causes a shortage of statistical databases supporting elite athletes' preparations and results, and it also causes a lack of research.

The subtheme (integration of SSSs to athletes' preparation) indicates that there has been a good integration with the majority of them. However, with those who didn't have the chance to benefit from the integration, it was due to the divergence of conceptualization between coaches and sport science professionals. This conflict lies in the lack of field experience from one group (sport science professionals) and lack of scientific knowledge in the other group (coaches); according to counterpart's perception.

Theme four is (internal and external environment), and its subtheme is Human resources. It is considered here that sport science professionals are highly qualified while considering the level of professionals in the country. And while also minding the gap when comparing with international professionals. On the other

hand, there is a negative perception regarding administrative staff in terms of knowledge in managing elite sport facilities. Such divergence is also perceived through the shared mindset. Sport science professionals are “high- performance- oriented”, while the administrative staff is “money- generation- oriented”. This is directing the organization towards objectives that are not related to sport development.

Moreover, budgetary issues affect employment stability. The institution is in a transition period where its legal, economic and administrative status is blurry and not clear. This instability does not allow managers to hire professionals permanently and they are constantly changed. The worst impact is in the area of sport sciences, where athletes are exposed to non-stable routines and approaches very often. It is advised that professionals of key areas must stay for at least one Olympic cycle (four years). Such rapid change in professionals affects the results’ database which leads to a lack of resources for research purposes within the elite performance area.

The subtheme (national and international image) shows that the center is not ranked internationally yet. However, it is in a good process. Target customers are attracted for the geographical altitude benefits and low costs of the center when comparing it with other centers. It is also perceived that there is a focus on attracting foreign athletes instead of increasing the use of the centers by national athletes.

The last theme is (strategic positioning and development), and its subtheme is: (financing). It highlights the lack of economic resources and exposes dependence on public funds as the only financial source. It is necessary to find an alternative for financial resources such as private companies. Moreover, it is necessary to implement policies that benefit those companies for their contribution. Such implementation will be made by high-level policy makers. It is also important to establish inter-institutional cooperation agreements in order to improve critical areas (like laboratory and recovery services) without using the organization's budget. There is dependence from the centers on the Secretary of Sports (ex-Ministry of Sports). The entity determines how the

resources are provided for the HPTC, and how those resources have to be managed even though the HPTC does not belong to the Secretary of Sports. It is considered that the center should become part of the secretary of sport; in order to change its legal status of a public company into a ‘social benefit investment’ in order to manage its own budget. The center of Cuenca shares budget with the four other centers nationwide, several of which have no demand. The institution should select the centers which have the highest demand and the best chance for development.

The subtheme (regional network) brings a key partner (FDA) to reach better results by settling common objectives and optimizing resources with a regional vision. The other element is universities. Such a partnership would make it possible to interchange benefits for research development, create studying options for athletes and create field experience chances for students who are related to the topic. National federations and the “High-Performance Program” are also actors with influence over the development of the centers.



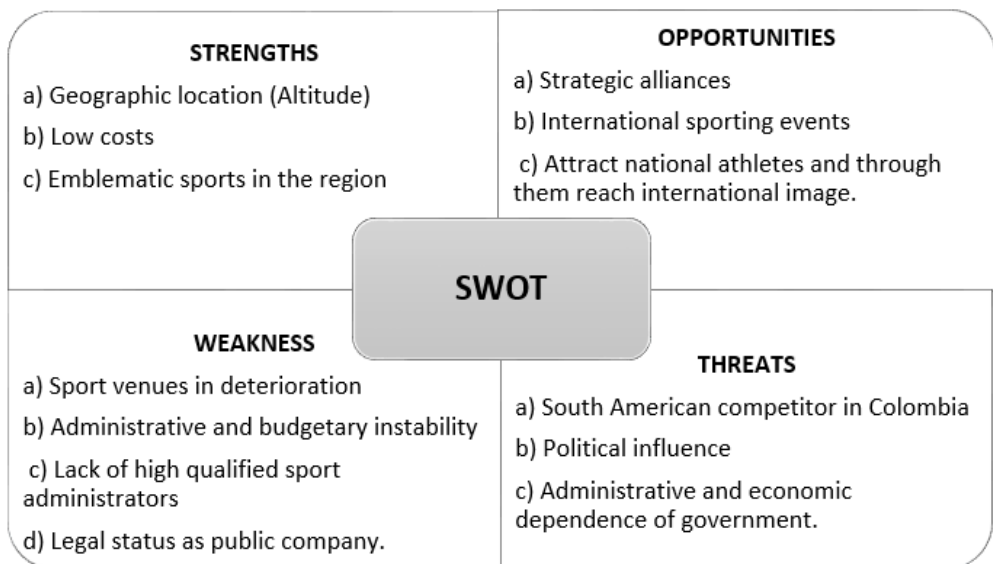
The subtheme (legal Status) determines that the legal figure or status of the organization needs to change. Currently, the center is a ‘public company’. This type of public organizations must be self-financed. Such a requirement is not reachable according to the nature of elite sport that requires high investment and returns back sport and social benefits. This must be also understood by policymakers. The current legal status has a negative impact among the center’s operations and its outputs according to respondents’ perception.

The subtheme (management model) brings to the table a “Dual Operational Plan”. The first one is the funds’ generator, which will provide general services for every kind of customers linked to sport. And the second one is the elite sport developer, which provides the specialized services for selected sports. It is important to promote the centers according to the schedule of international events, continental ones and finally national ones.

The subtheme (orientation) gives an objective for the operational plan: strategic sports, which should be the focus. The

sports and modalities are athletics, combat sports, triathlon, swimming and cycling. Hence, disciplines which demand (endurance) and hypoxic training. This is based on parameters of available sport venues and georeferencing advantages. Also, the historical results and current best athletes in these sports are reasons to consider this as the strategic sports.

Two additional findings are presented. First one is, the integral services that athletes and coaches mainly expect from a high-performance center: a) Sport venues for training, b) Accommodation, good quality nutrition, transport and recreational zones, and c) Sport Science Services. The second and final one is, the elements which considered as strengths, weaknesses, opportunities and threats (SWOT) of the HPTC:



As previously indicated, within this point the researcher will follow a ‘three-phase’ process of analysis: 1) State of play, 2) Competitive advantage and 3) Strategy. Each phase corresponds to each objective. The following figure illustrates each one of them:

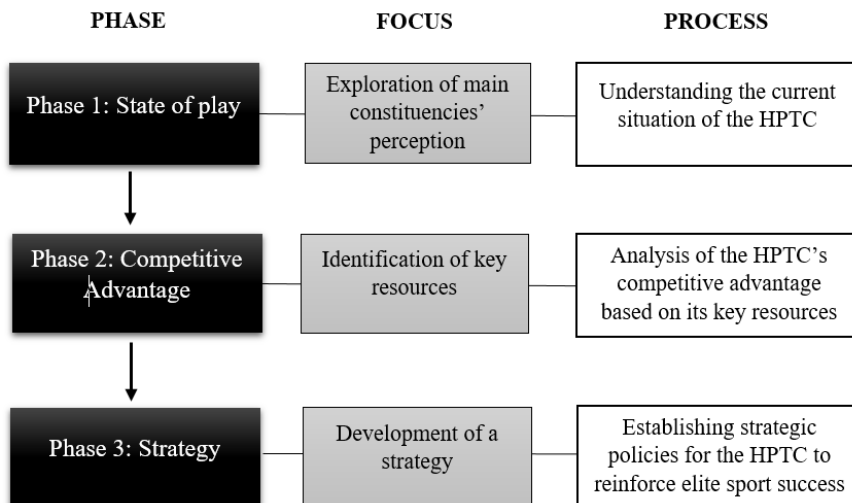


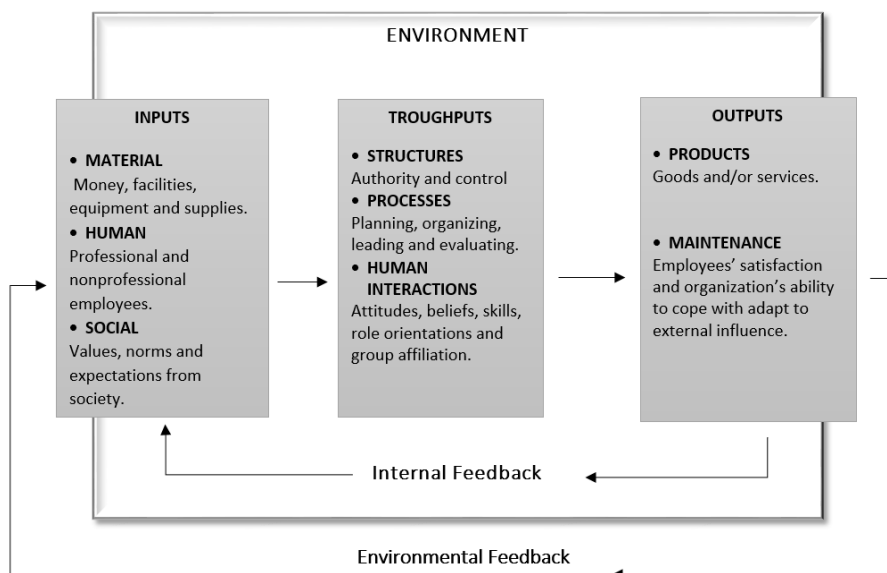
Figure 5. Three-phase analysis' process

## 5.2. Analysis Phase 1: State of play

In order to achieve the first specific objective, the researcher will bring the findings which are described and summarized in chapter 4 and is going to locate the key elements in an organization's model proposed by Packianathan Chelladurai (2014). This step will provide a clear picture of the current situation of the subject of this study.

Chelladurai's studies explain that sport organizations can be seen as systems because of the complex interrelationships and interdependence within its elements. Moreover, they are defined as open systems due to the interaction with the environment. The organization receives resources (inputs), then, process converts or transforms (throughputs) them into desirable products (outputs) for the environment; the output often receives a feedback function (internal and external). The sport organizations influence and are influenced by the economic, social and cultural characteristics of the context in which they operate. The following figure illustrates the conceptualization of an open system.

Figure 6. Input-throughput-output conceptualization of a system  
Modified from Chelladurai (2014)



Adapting Challadurai's model to the researcher's case of study makes it possible to allocate the key elements among the system as shown in figure 7. Some components were modified according to this case of study.

In addition to the themes and subthemes, the research brought 'additional findings' which are also allocated in the State of Play of the HPTC. The expected integral services are identified as [Int. Ser.] and the main components from the SWOT analysis can

be identified as [S] for strengths, [W] for weakness, [O] for opportunities and [T] for threats.

Moreover, each element was identified with a sign: (+) good, (-) bad, or, (>) propose. The criteria to define the qualification of each element was obtained from the findings.

The lines show the dynamic process of how inputs, throughputs, outputs and feedback function flows (based in Chelladurai's model). In addition to that, the relations between elements that were identified as critical areas are connected by lines with different patterns.

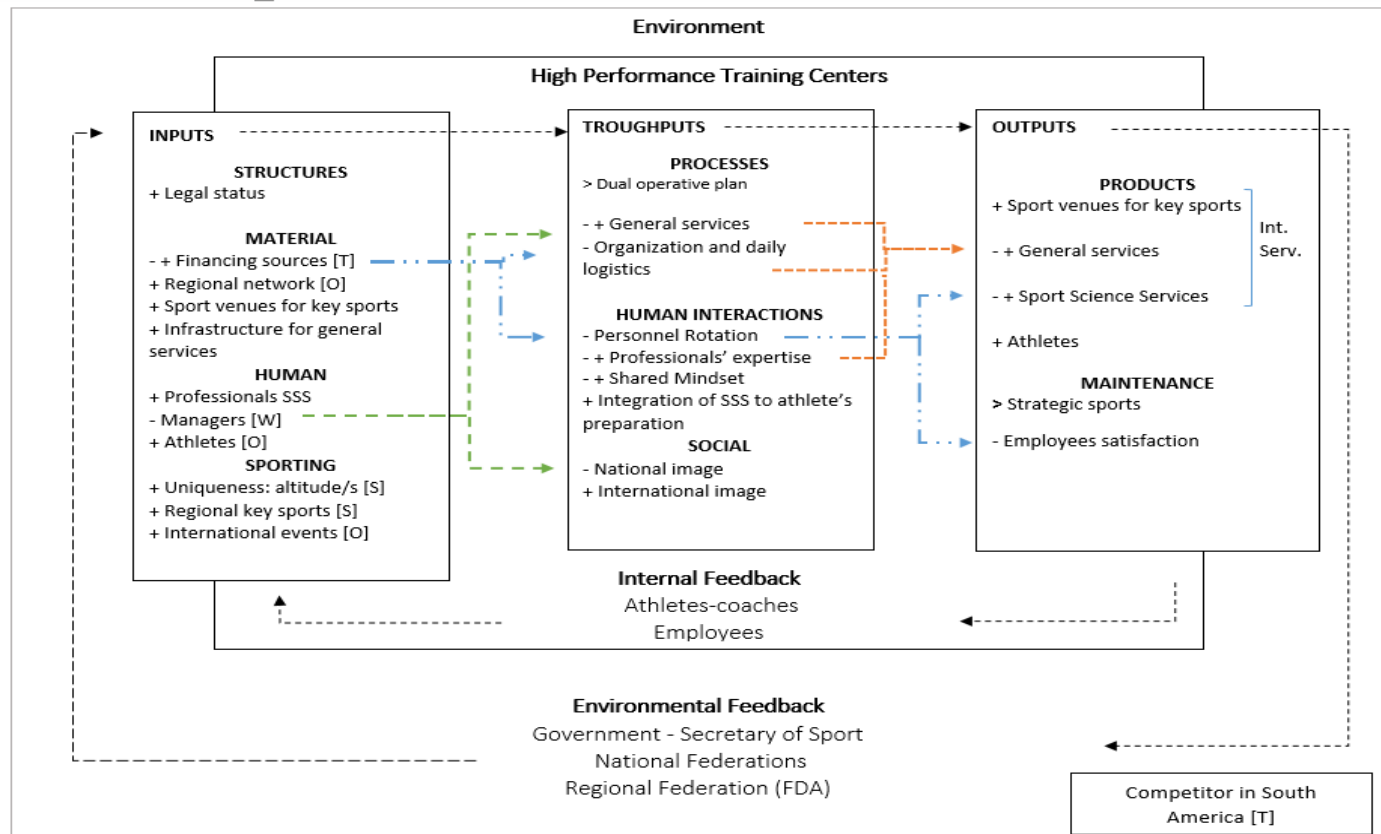


Figure 7. State of play of High-Performance Training Center



The summary presented in chapter 4 provides a detailed description of the current situation of the High-Performance Training Center. Figure N.7 is based on the findings, and according to those findings, a qualification is given to each element.

Within the following, the researcher will describe the current situation or ‘State of Play’ of the HPTC in two groups a) Critical Areas, and b) Available Resources. The relation between inputs, throughputs, outputs and feedback function will be analyzed.

#### 5.2.1. Critical Areas

Legal status: according to the managers’ perception, the legal status of the organization as ‘public company’ is forcing the generation of economic profitability. However, through documental analysis of the laws that regulate the ‘public companies’ the following articles establish a different context:

Presidential Decree No. 439, article 4.- In the Public Company High-Performance Training Center is predominant the profitability with social and environmental responsibility, a

condition that makes the company's financing subject to the article 42 of the Organic Law of Public Enterprises- OLPE (In Spanish: Ley Orgánica de Empresas Públicas-LOEP).

OLPE (LOEP), Art. 42. - FINANCING FORMS. – “Public companies, their subsidiaries and affiliates may adopt the financing forms they deem appropriate to fulfill their institutional purposes and objectives (...)”.

OLPE (LOEP), Art. 40. - SOCIAL PROFITABILITY AND SUBSIDIES.- “(...) the existence of public companies constituted exclusively to provide public services is recognized, in which there is a pre-eminence in the search for social profitability, in favor of which the State may constitute subsidies and state contributions that guarantee the continuity of the public service. The subsidies and contributions will be destined preferably for the expansion of public services in areas where there is a deficit (...)”.

According to the laws that regulate the HPTC, the organization is not forced to generate economic profitability as the main objective. Yet, it has to generate social profitability.

Accordingly, and from the researcher point of view, the legal status is not considered the main problem. However, it is necessary to show the social profitability that the organization generates and assure this understanding among decision makers.

Instead of considering the legal status as the weakness, it is important to consider the dependence on public funds as the only financial source is the weakness. This situation is limiting the center under public funds' regulations which is inefficient when it comes to daily operations' needs. This situation can be improved through the implementation of an adequate management model capable to demonstrate social profitability and at the same time capable to reach the institutional objective - developing elite sport.

General services. Even though dinning service has improved significantly, the public purchasing system is not flexible and elite athletes' needs cannot be fulfilled in many cases. The same system affects the organization and daily logistics, when daily issues need to be solved, managers cannot fix them due to the amount of time and procedures required for public funds management.

Small details of daily logistics can affect the athletes' performance, for example: during training camps, athletes are exposed to high training loads that bring physiological changes in their bodies and make them vulnerable to the environment. In this context, when the center cannot provide warm water for several days, and considering the city's climate, it is easy to catch illnesses which negatively affect athletes' sport performance.

The economic resources provided by the government and the Secretary of Sports assure the existence and maintenance of the centers. However, they are not enough and public funds' management has policies that do not allow service improvement.

The dependence on government (as only financial source) is negative due to the economical and political instability. This situation is affecting human resources management too.

The instability does not allow managers to hire professionals permanently, therefore they are constantly changed. There is a high rate of employee rotation. The worst impact is in the area of sport sciences (SS), where athletes have to interrupt processes and

methods and start new ones very often. At the same time, this fact doesn't allow to develop the level of expertise in sport sciences, neither research nor statistics related to the athletes. In this critical area, it is necessary to keep professionals for longer periods, for example, four years or (one Olympic cycle) in order to get real results. Elite sport requires long term processes to show results, as well as sport sciences need time to show results.

It is necessary to find new financial sources, for example, private sector; the implementation of policies that benefit private companies for their contribution with sport could be the link to bring private investors. Another opportunity is through inter-institutional agreements to avoid expenses and improve critical areas like: complementary services (recovery methods and bio-laboratory) in sport science services.

There is no shared mindset, because sport science professionals have a “high performance” orientation, and administrative staff has a “money generation” focus which is directing the organization towards objectives not related with sport

development. This “money generation” mindset among administrative personnel is a consequence of the institutional legal status, more accurate, it is a consequence of the way administrators conceive and manage the legal status of the organization.

There is a positive network with the regional federation of sport (FDA) which provides the sports venues. It is real that many of those sport venues are in process of deterioration. However, their conditions are good enough for training.

By setting common goals between the HPTC and the FDA, it is possible to get economic resources and investments focused on regional development of sport. The resources should be prioritized to improve the strategic elements like specific sports with the best possibilities of development. Another important actor in the region is the University, due to the lack of research of the HPTC. Working with the university, both institutions could receive benefits to develop their objectives. Research development for both, students from sport-related careers could use facilities and get the experience while working with athletes. Moreover, coaches and sport science

professionals. And finally, athletes could have opportunities to study.

The infrastructure for general services (accommodation and dining) has high quality conditions. Moreover, there is a necessity to implement transport service between venues and recreational areas. Such parameters have not being implemented due to the low importance given to psychological aspects and recovery time between training loads; both factors are fundamental at elite sport level.

Regarding human resources, there is a consideration that sport science professionals are highly qualified, taking into account the level of professionals at the country level, while minding the gap when comparing with international professionals. On the other hand, there is a negative perception regarding administrative staff and their knowledge in management of elite sport facilities. This lack of knowledge from managers affect the general services, sport science services and organization and daily logistics. For example, the missing previously mentioned service: (transport between

venues and recovery methods). This factor results in athletes' and coaches' needs are not being fulfilled. This is considered as a weakness. However, it doesn't require economic investment to be fixed, but to select professionals qualified for elite sport facilities management.

From the additional findings, it is visible that athletes and coaches expectations of 'Integral Services' are a) Sport venues for training, b) Accommodation, good quality nutrition, transport and recreational zones, and c) Sport science services; which in other terms are included within the outputs that the center is already providing: a) Sport venues, b) General Services and, c) Sport Science Services. This indicates that the outputs are aligned with the customers' expectations; the important step is to improve the quality of those areas to the level that they will satisfy the standards elite sport needs.



## 5.2.2. Available Resources

### *5.2.2.1 Inputs*

The best training arenas are the trails for long distance training, the sport combat coliseum, the velodrome, the track and pools; one semi-Olympic inside the center and an Olympic one in FDA's sport complex. They provide adequate conditions for the disciplines of: Athletics, triathlon, cycling, swimming and combat sports.

The region is well known for its high results in certain sports having athletes ranked in top positions worldwide and at Olympic level. Results in the disciplines of Athletics (long distance modalities), swimming (open water), cycling and triathlon are the emblematic disciplines among the region. The athletes are the customers but also a value. If the centers become a key factor in the athletes' sporting development and make them experience real benefits from the center, they will expand a positive image of the center because of their international exposure. Athletes would also be the link to bring sponsors and partners.

The uniqueness of the center for training is considered as its strength and as a key element for its development. The characteristic of Georeferencing, or the geographical altitude of the city of Cuenca at 2.550 meters above sea level; In addition to the alternative altitudes near to the city: a) National Park “El Cajas” with altitude of 4.000 meters above sea level, b) “Yunguilla” Valley: at 1.100 meters above sea level and, c) the Coast region. When athletes require sea level the distance is 3 and half hours which is considered near too. This condition allows sport professionals to implement different training plans focused on different physiological effects. The sports that use this advantages the most are sports that require long distance and hypoxic training. The most recurring disciplines that use the center are athletics, sport combats, swimming and triathlon.

International events are considered an opportunity for the centers. Marketing strategies should focus on customers looking for altitude training, adaptation to time and alimentation differences. It is important to highlight that the HPTC of Cuenca is seen as cheaper than others.

#### *5.2.2.2. Throughputs*

Analyzing the key resources or inputs that the HPTC possess, and also considering the critical areas of it, a “Dual Operational Plan” is proposed. The first one is the income generator which will provide general services for every kind of customers linked to sport. And the second is the elite sport developer, which provides the specialized services for selected sports. It is important to promote the centers according to international events continental and worldwide.

The operational plan should prioritize strategic sports. The sports and modalities are athletics, combat sports, triathlon, swimming and cycling, specifically modalities which demand (endurance) and hypoxic training. They are based on parameters of: available sport venues and georeferencing advantages. Also the historical results and current best athletes in those sports are reasons to consider this as the strategic sports.

Based on studies done by Mick Green and Ben Oakley (2001) where they studied elite sport structures from different

socio-political systems, their research indicates two key aspects among the different elite models, first of all, they found factors which reflect the trend of a uniform (global) model of elite sport structures. Second of all, the patterns and traditions of each nation that shape the sport system. They found ten common factors within which established a foundation for a model of factors as the reason of international sporting success.

From the findings of common characteristics to succeed in elite sport, the researcher wants to highlight one element: the resources targeting in narrow scope of sports.

Prioritization of selected sports. The choice of strategic disciplines is the result of two processes; both complement each other to achieve elite sport success. One, 'resource targeting' is the selection of specific disciplines to be prioritized. This strategy has been adopted by many countries and it reflects a uniform (global) model of elite sport development.

The second process addresses the criteria to select particular disciplines. This process varies according to the local context. Two

of the most important parameters under consideration are cultural and sporting criteria. Godfrey & Holtham (1999) suggested, ‘A limited number of sports will have been identified, based on cultural and sporting criteria’ (p. 11). Such patterns clearly vary from one nation to another. This study was previously described in chapter N2 Literature review, point 2.2.1.1. *Meso-level factors*: sport policies and politics. The study supports the orientation of strategic sports prosed in this part of the research.

#### 5.2.2.3. *Outputs*

The expected outputs mainly are a) the development of Ecuadorian elite sport in key disciplines, b) development of the center’s image as ‘the place’ for the development for key sports, c) regional sport development for strategic sports. These outcomes will fulfill the expectations of society and interest of the external partners and sponsors: government, secretary of sports, regional federation (FDA) and national federations (of selected sports).

Through the analysis of the organization’s internal and external elements, the first main objective of this research was

achieved by bringing a deep understanding of the current situation of the High-Performance Training Center. Critical areas and available resources were identified; these factors are the base to develop the next phase.

### **5.3 Analysis Phase 2: Competitive Advantage**

In order to achieve the specific objective number two, which is “To analyze the key resources of the (HPTC) in order to identify a competitive advantage”, the researcher will apply the theoretical framework from Robinson and Minikin (2012) about competitive advantage in sport organizations. According to the theory, two processes will be applied. 1) Identify competitive advantage. 2) Analyze the relation between resources, capabilities and competitive advantage.

First, in order to identify competitive advantage among the organizations’ resources, four conditions proposed by Robinson and Minikin must be full-filled:

1. **Valuable:** when the resource can be used to take advantage of opportunities and/or minimize threats, and in this way, permitting the organization to improve its objectives' achievement.
2. **Rare:** when it is different among competitors' resources;
3. **Imperfectly imitable:** if the resource, cannot be copied by competitors.
4. **Organizationally appropriable:** if the organization can use the resource gaining value, rather than others can obtain it.

From the available resources identified among the previous processes, the key resource which can become the competitive advantage of the HPTC is the 'Georeferencing (altitude/s) condition'.

The characteristic of Georeferencing, is the geographical altitude of the city of Cuenca where the center is located at 2.550 meters above sea level. Also the alternative altitudes near to the

city: a) National Park “El Cajas” with an altitude of 4.000 meters above the sea, b) “Yunguilla” Valley: the place is at 1.100 meters over the sea level and, c) the Coast region. When athletes require sea level, the distance is 3 and half hours which is considered near too. This condition allows sport professional to implement different training plans to focus on different physiological effects.

#### 5.3.1. Valuable

The Georeferencing (altitude/s) condition is considered valuable because it can take advantage of the following opportunities:

a) Attract more national and international elite athletes whose preparation requires different geographical altitudes. The athletes are the customers but also the value. If the centers become a key factor in the athletes’ sporting development, making them experience real benefits from the center, they will expand a positive image of the center because of their international exposure. Athletes would also be the link to bring sponsors and partners.



b) Create a strong network between the centers and the external actors (FDA, University, National Federations, Secretary of sports/government) which at the same time provide the inputs the center needs. Establishing a ‘win-and-win’ situation among organizations will emerge.

c) International events are a pool of customers. Identifying the possible events that require altitude adaptation and promoting the center’s benefits to those countries or teams which would require them.

#### 5.3.2. Rare

The Georeferencing conditions for regional key sports is a unique characteristic for training. At national level, there is no competitor with this type of resource. This is the reason why the centers must attract national customers as a first step.

According to main constituencies’ perception, this characteristics can be found in few countries in the American Continent: one in South America (Colombia) and several in Central America (Mexico) and North America and the United States.

However is also known that the costs in the Ecuadorian center are less than in the others.

#### 5.3.3. Imperfectly imitable

The natural conditions, especially the alternative altitudes cannot be easily copied by competitors. To imitate such conditions, the implementation of them would take a long time and require huge amounts of money.

#### 5.3.4. Organizationally appropriable

The organization has the necessary resources and capabilities to develop the georeferencing conditions for regional key sports as an advantage. Some important inputs of the HPTC depend on its partner organizations (FDA, National Federations, Secretary of Sports), which will be benefited too with the development of this competitive advantage, and consequently, the support given should improve the input's conditions. Within this context, the HPTC gains huge value in developing this unique characteristic.

After the analysis of the conditions, a key resource must be available in order to be developed as a competitive advantage for the organization. The researcher concludes that the 'Georeferencing (altitude/s) condition' meets the conditions of valuable, rare, imperfectly imitable and organizationally appropriable. This is the competitive advantage that the HPTC of Cuenca can develop; with this result, the second main objective of this research was achieved and allows the development of the next analysis' phase.

#### **5.4 Analysis Phase 3: Strategy**

Based on the current situation of the organization and the competitive advantage analysis, this point will reach the third specific objective which is 'To suggest strategic policies for the (HPTCs) which will reinforce the factors that lead to successful elite sport in Ecuador'.

To analyze the relation between capabilities and competitive advantage, the researcher will use the model proposed by Robinson and Minikin as a base, which was also adapted from previous

studies and was applied to National Olympic Committees (NOCs).

The following figure illustrates the link among elements.

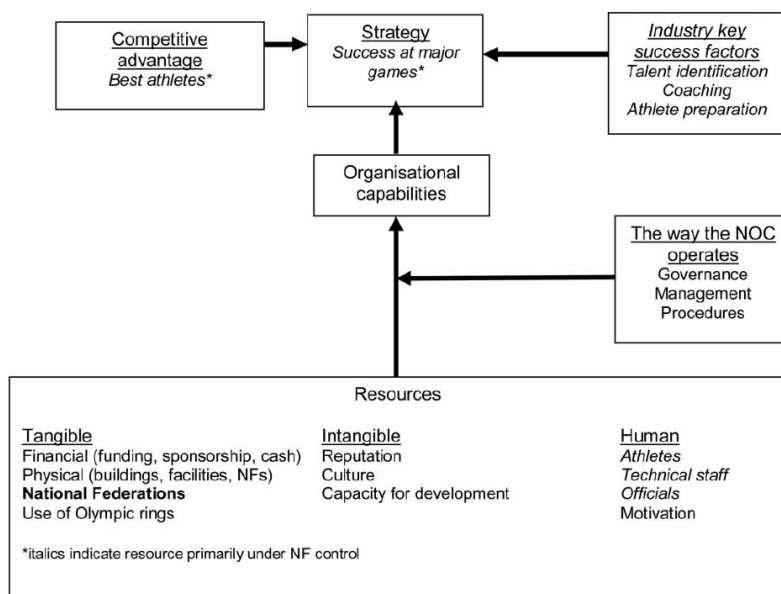


Figure 8. The Links Among Resources, Capabilities and Competitive Advantage in NOCs. Robinson & Minikin (2012)

The key components of the HPTC found in previous phases are placed according to the model from figure N. 8, with one modification of the component '*Industry key success factors*' which was adapted to '*Complementing key actors*'. The main objective is to establish a strategy based on the resources, organizational capabilities, competitive advantage and complementing key actors

through understanding their interaction and interdependence. The strategy will be the foundation to achieve the objective number three of this research.

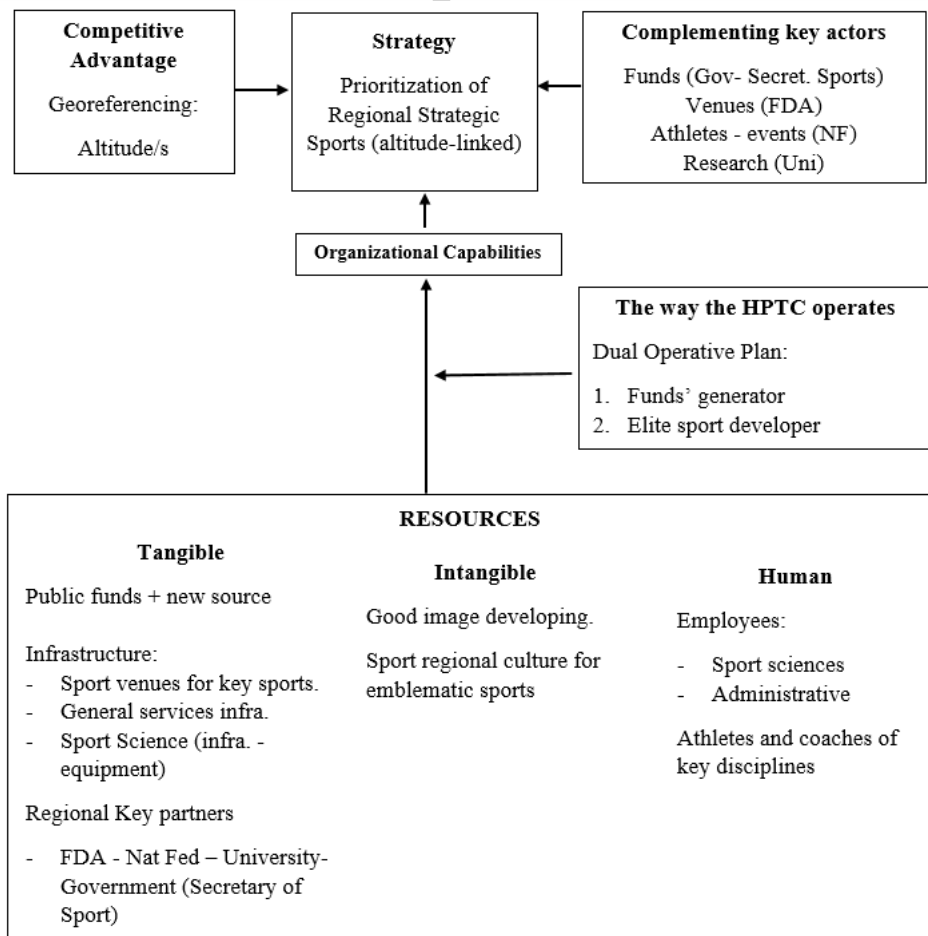


Figure 9. The links among Resources, Capabilities and Competitive Advantage in High-Performance Training Center of Cuenca

The elements placed in the model of figure N.9 are the currently available ones, and also those which can be implemented. All of them are obtained from the main constituencies' perception explored in this research. The coordination between those elements would allow the development of the center and the achievement of the institutional objectives which are: 'To administrate the high-performance training centers', 'To provide integral services to national and international athletes in order to improve their athletic performance', 'To develop scientific-sports research focused on projects related to athletic performance. Precisely, strategies and tactics that lead to the development of high-performance training centers', 'To provide the optimal conditions in order to develop high-performance athletes and spot new talents'.

Within the following, the relationships between the elements showed in Figure N.9 will be described. The links among Resources, Capabilities and Competitive Advantage in High-Performance Training Center of Cuenca.

#### 5.4.1. Resources

##### *5.4.1.1. Tangible*

Public funds: the economic resources that are provided by the government through the Secretary of Sports, these funds assure the existence and maintenance of the centers. However, they are not enough and public funds' management has policies that do not allow service improvement. This represents a critical area of the centers. In order to improve this, it is necessary to find new financial sources which can be found with the private sector. The implementation of policies that would benefit private companies for their contribution to sport could be the link to bring private investors. Another opportunity is through inter-institutional agreements to avoid expenses from the center's budget. The resources should be allocated for the critical areas in sport science services, general services and sport venues. Even though the mentioned areas have good conditions, they must improve in order to achieve the high standards that elite sport requires.

Infrastructure: The best sport venues and training arenas are the trails for long distance training, the combat sports coliseum, the

velodrome, the track, and pools; one semi-Olympic inside the center and an Olympic one in FDA's sport complex. They provide adequate conditions for the disciplines of athletics, triathlon, cycling, swimming and combat sports. The infrastructure for general services has high quality as well as the equipment for sport sciences.

Regional Key partners: the regional federation of sport (FDA) is already cooperating with the development of the HPTC providing the sport venues. For FDA, the centers are a factor that improves the development of sports in the region. The National Federations are using the centers to do training camps and they are the organizations with the elite athletes and the link with international sport events. However, most of them do not have the infrastructure that the HPTC provide. The government, via the Secretary of Sports, is investing in elite sport. Part of this investment is given for the HPTC; the elite sport achievements bring the social benefits for what the public funds are invested in. Thus, the development of elite sport supports the government's investments. The Universities are the entities interested in the



development of research, particularly, in the area of sports there is a general lack of research in the country; the HPTC can provide them the space to develop research and to improve the quality of students from sport-related careers. The relationship with these key partners has in every case a double-way benefit; this context must be the foundation to establish a strong network where all the actors achieve development.

#### *5.4.1.2. Intangible*

The image of the centers is in a good process of development. The georeferencing (altitude) condition is attractive for national and international athletes. Additionally, the low costs are convenient for foreigners looking for altitude training, in comparison with other options worldwide.

Sport regional culture for emblematic sports: the historical results in certain sports are part of the identity of the region, consequently, the society's expectations and involvement in the development of those sports are a special interest for private and public sponsors.

#### *5.4.1.3. Human*

Employees from sport sciences and administrative personnel bring value to the organization, their professional performance leads to achieving the organization's objectives. It is a fact that financial conditions are currently affecting their professional development. One consequence is a personnel's constant rotation, and its worst impact is on sport science. This doesn't allow the development of research, statistics and the improvement of professionals' expertise. The situation is totally opposite to the elite athletes' preparation which requires long-term support from sport science assistance. This issue should be fixed through an adequate financial- managerial model to assure job stability for longer periods.

In the case of administrative staff, it is necessary to recruit people qualified in public administration but also qualified for sport facilities management. This lack of knowledge affects the organization and daily logistics among general services of the center. The situation does not require a high investment but the selection of qualified personnel.

Athletes and coaches of key disciplines also represent value for the organization. If the centers become a key factor in the athletes' sporting development making them to experience real benefits from the center, they will expand a positive image of the center because of their international exposure. Athletes would also be the link to bring sponsors and partners.

The coordination of the components: *Resources* and *The way the HPTC Operates* determine the *Organizational Capabilities*.

#### 5.4.2. Organizational Capabilities

##### *5.4.2.1. The way the HPTC operates*

The center's accommodation capacity is (287 people). This makes the operational costs very high because the demand is low when compared to what is offered. And, adding the administrators' concept about the legal status of the company, they try to increase utilization percentage in several ways; even if they are not focused on elite sport development.

In order to increase the demand and at the same time keep the orientation of the center which is focused on elite sport

development, a Dual Operative Plan is proposed. The plan has two components.

The first one is the ‘Funds generator’ which will provide general services for every kind of customers linked to sport. And the second is the ‘Elite Sport developer’, which will provide the specialized services for selected sports with the highest possibilities of development.

#### 5.4.3. Competitive Advantage

##### *5.4.3.1. Georeferencing Altitude/s*

According to the analysis of phase number two, and regarding the conditions that a key resource must be handy in order to be developed as a competitive advantage for the organization, it was concluded that the ‘Georeferencing (altitude/s) condition’ meets the conditions of valuable, rare, imperfectly imitable and organizationally appropriable. This is the competitive advantage that the HPTC of Cuenca can develop.

#### 5.4.4. Complementing key actors

Robert Grant (as cited by Robinson & Minikin, 2012) considers that if resources cannot be increased, they need to be leveraged and developed to improve competitive advantage. This can be done by concentration, accumulation, conserving or complementing of resources. The complementing approach is particularly relevant for this point.

The external actors complement the resources that the HPTC needs to function. In this part, the key inputs and organizations linked to one another will be analyzed.

The relation between them was already analyzed within the tangible resources. Objectively, the resources that each key partner complements with are: Government (Via the Secretary of Sports), provides the funds, the Regional Federation of Sports (FDA) provides the venues, National Federations provide the athletes/coaches and sport events, and the University would provide the research development. Each element was identified as a key input for the center's functioning.

#### 5.4.5. Strategy

Based on the relation between the resources, the organizational capabilities, the competitive advantage and complementing key actors, the strategy is:

#### **‘Prioritization of Regional Strategic Sports’.**

##### *5.4.5.1. Strategic policies*

Finally, this part will achieve the third objective ‘To suggest strategic policies for the (HPTCs) which will reinforce the factors that lead to successful elite sport in Ecuador’.

It is worth mentioning that within chapter 5 different theoretical models were applied to find out the current situation of the HPTC. The competitive advantage and the strategy, these elements correspond to the main research objectives. Moreover, this final stage of suggesting strategic policies brings back the key elements of the ‘State of the Art’ of training facilities presented by Nikolai Böhlke & Maja Neuenschwander (2015). The mentioned study is the theoretical framework of the present research.

The strategic policies are suggested starting from generic policies (also known as umbrella policies) because the research findings showed that the majority of the current critical areas and issues cannot improve without adequate generic policies.

**Strategy:** Prioritization of Regional Strategic Sports

The strategy consists of three main elements: Prioritization, Regional, and Strategic Sports. Generic policies are proposed according to each main element of the strategy. Accordingly, specific policies are suggested for the most important components. Specific policies present an area of ‘policy impact’ and start-line actions for the critical areas found within the current situation of the HPTC of Cuenca.

*Prioritization*

**Generic policy:**

“Financial, political, legal, administrative and technological components of the institution have to work in synergy for the achievement of strategic goals”

**Specific Policy A)** Establish a management model with objectives of elite sport development and economic resources increase according to the institutional strategic goals.

**Area of policy impact:** financial- administrative

**Start line action:** Implement a Dual Operational Plan: 1) ‘Elite sport developer’, provides specialized services for regional strategic sports. 2) ‘Funds Generator’, provides general services opened for every kind of customers linked to sport.

**Specific Policy B)** Financial, material and human resources must prioritize maintenance and improvement of the integral services provided by the high-performance center according to athletes’ and coaches’ needs.

**Area of policy impact:** human resources, general services and sport science services.

**Start-line action:** 1) Recruit professionals who are highly qualified in elite sport. 2) Assure employees’ work stability



according to elite sport needs. 3) Invest resources to improve critical areas of sports sciences, general services and sport venues.

### *Regional*

#### **Generic policy:**

“Strengthening and creation of regional inter-institutional relationships to develop strategic sports through resources complementing purposes”.

**Specific Policy A)** Regional strengthening and creation of inter-institutional cooperation agreements. Common objectives and ‘Double-way’ benefits must be established in order to complement the necessary resources for the parties.

**Area of policy impact:** Infrastructure (sport venues), sport science services (research development), national and international image.

**Start line action:** 1) Improve strategic-sport venues’ infrastructure according to international elite standards in cooperation with the Regional Federation of Sports (FDA). 2)

Develop long-term research projects in cooperation with the University. 3) Targeting National Federations of strategic sports to hold training camps and sport events in the region.

### *Strategic Sports*

#### **Generic policy:**

“Regional strategic sports are selected in order to prioritize resources for their development”.

**Specific Policy A)** Analysis, selection and development of sports-related to the region’s training uniqueness (georeferencing conditions of the region).

**Area of policy impact:** sport science services, general services and sport venues.

**Start line action:** Select sports and modalities with the highest probabilities to achieve elite sport success with relation to the georeferencing conditions of the region and center: athletics, combat sports, triathlon, swimming and cycling, specifically for modalities which demand (endurance) and hypoxic training.

When Jenkins W.I. (1978) defined public policy as “a set of interrelated decisions taken by a political actor or group of actors concerning the selection of goals and the means of achieving them within a specified situation where these decisions should, in principle, be within the power of those actors to achieve.”

Three main aspects were addressed in this study, and it made it significant. First of all, the interrelatedness and interdependence nature among decisions. Which means that decisions are part of a sequence of decisions. Thus, it cannot raise from an isolated view (Turgeon & Savard, 2012). The present research has deeply explored the external and internal elements of the HPTC as a system. Particular importance was given to the interrelationships among those elements, their interaction and interdependence.

Second of all, the political actors, whose governmental involvement reflects power and policy influence (Houlihan & Green, 2005). The present study explored the perception of the different main constituencies of the organization, managers, sport

science directors, coaches and athletes. For the researcher, it was particularly important to understand the context not just from the decision makers' perspective, but from the policy implementers and from the policy affected groups, bringing a holistic understanding of the center's current situation.

And third, the achievement of goals and the identification of the means to achieve them (Turgeon & Savard, 2012). The present research had explored the relationship between institutional objectives and the way the organization currently operates to reach them. The objectives are not achieved due to a lack of synergy among the available resources and actors, which interact in the regional sport development. According to the main constituencies' experience and knowledge, key elements were identified and presented as: working in a strategic way can reinforce the development of elite sport in the region and in the country indeed.

Through the identification of a strategy and suggesting strategic policies for the High-Performance Centers which will

reinforce the factors that lead to successful elite sport in Ecuador, the third main objective of the present research was achieved.

The research purpose ‘To analyze the role of the (HPTC) (elite training facilities) of Ecuador as a key factor to achieve success in elite sport’ was applied within the vision of each analysis stage among the present study. Through the three-phase model (figure N. 5) applied for the research analysis; the three main objectives of this research were achieved and are highlighted in each phase conclusion.

To conclude the analysis, and in order to address the main research question: How the ‘High-Performance Training Center’ can become a key factor to achieve success in elite sport in Ecuador? The researcher considers that the High Performance Training Center can become a key factor to achieve success in elite sport in Ecuador through the implementation of the strategy ‘Prioritization of Regional Strategic Sports’ for what its internal resources, as well as regional actors, must complement strengths and work in synergy to develop selected sports related with the

georeferencing conditions of the region, which are actually the sports with the highest probabilities to achieve elite sport success.

### **Limitations**

The present research applied eleven interviews among four main constituencies: athletes, coaches, managers and sport science directors. The number of respondents is small in relation to the number of groups' perception aimed to analyze.

The data collection was in the country's native language (Spanish). Thus, the translation can present a margin of error particularly for technic and legal terminology. Language barriers represented a limitation for this research.

### **Conclusions**

Talking about findings, one of the most important things is the opportunity to develop a competitive advantage from the Georeferencing conditions of the region where the center is located. This is supported by emblematic sports that already have success in elite sport.

Another important finding is that the HPTC's legal status and the institutional objectives determine that the center was created to develop elite sport and generate social profitability through its activities. However, starting from governmental decision makers, there is an orientation to economic profitability. This conceptualization affects daily throughputs and consequently the outputs. A base of a Dual Plan Operation is proposed in order to promote the funds' generation and the development of elite sport. By the implementation of such a model can cover the legal dispositions and institutional objectives, as well as, contribute with the need for economic resources generation.

As a mean to achieve institutional objectives and to develop elite sport successfully, the 'Prioritization of Regional Strategic Sports' was proposed with clear generic policies. Moreover, and according to the specific context of the organization, specific policies focused on the improvement of critical areas within the institution and start-line actions for a future implementation of those policies are also proposed.

For developing countries, as it is the case in Ecuador, the resources are limited for sport development. However, a first step to achieve elite sport success can start with narrowing the scope of sports (focused on elite sport success), allocating the resources strategically and working coordinately with key actors to achieve common goals.

The researcher considers that the applied theories and models can be combined, and they also provide a basis from where sport managers can improve their sport organizations, specifically, elite sport facilities. Moreover, the application of theories and models are part of strategic management, and in the case of developing countries where resources to develop sport are limited, it is necessary to be strategic on understanding, analyzing and coordinating those resources in order to develop sport according to our capabilities. Finally, the researcher concludes that it is necessary to learn from developed systems and models, but what is more important, is to find an own way to develop our systems according to our social, economic and cultural reality.



## **Recommendations**

For future researches, it is recommended to expand the number of interviewees in order to get a deeper and more technical insight regarding key areas like legal and sport science aspects.

The systematical process and combination of the theoretical framework with sport managerial models applied for the present research can be applied within elite sport facilities in similar socio-economic contexts as the High-Performance Training Center of Cuenca-Ecuador.

Even though the present study suggests policies according to the goals and available resources found, it is important to keep in mind that policy-makers and policy-implementers can directly influence policy outcomes but not the policy impact since it depends on other external factors, as it was established by Knill & Tosun (2012). Thus, for the suggested policies' management model's and strategies' implementation, the directions should be redesigned and reestablished according to the results and feedback

received from internal and external environment while going through its process.

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## **Appendixes**

### **Appendix A: In-depth Interview Questions**

#### **Dimension 1: Infrastructure**

IQ 1: How do you find the quality and quantity of the infrastructure in terms of:

- a) Sporting equipment, sporting venues,
- b) General services (dinning, accommodation, resting areas, etc.), transportation access and travel time, and
- c) Quality of the management in terms of organization, access to support services and daily logistics? How the needs of the athletes and coaches are determined and managed?

#### **Dimension 2: Quality of the daily training**

IQ 2: In your own words, please describe any unique characteristics that would satisfy local athletes and coaches and will encourage them to use the (HPTCs), and will also encourage international athletes from over the seas to come and train in Ecuador's (HPTCs). In other words, please describe what makes the (HPTCs) special.

IQ 3: Depending on your position at the (HPTC) eg, coach, athlete or technical staff, what kind of opportunities are there to develop training practices and sport science?

#### **Dimension 3: Specialized Services**

IQ 4: What do you think about the sport science services, support and recovery interventions provided at the (HPTCs)? And how are they integrated with the training process?

IQ 5: The (HPTCs) provide ‘integral services’. Depending on your position (Athlete, coach, etc) please describe what do you expect as ‘integral services’, how does the center provide it, and how it can be improved?

**Dimension 4: Internal and external environment**

IQ 6: Depending on your position, please describe the image you have about the (HPTCs) as “THE” place to be at in order to become successful in certain sport.

IQ 7: Depending on your position, how would you describe the shared mindset among coaches, athletes, managers, etc. (winning focused, clear performance, etc.)

IQ 8: Depending on your position, please describe how the experts in charge of support services are fully knowledgeable in their own fields. Moreover, please describe any room of improvement in order to manage the (HPTCs) in a more focused way (right person in his/her right place)

**Dimension 5: Strategic positioning and development**

IQ 9: (For managers only) please describe how secured are the financial, target customers and organizational plans for the centers in the future? Are there strategic planning policies or coordination with national governing bodies? Please describe that.

IQ 10: Depending on your position, please describe how the (HPTCs) play their role in developing the athlete’s training path for a certain sport.

IQ 11: Depending on your position, please provide at least one example on the (HPTCs)' strengths, weaknesses, opportunities and threats. And why?



국 문 초 록

# 성공적인 엘리트 스포츠의 전략적 관리를 위한 에콰도르의

High-Performance Training Centers 사례 연구

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본 연구의 목적은 High-Performance Training Center가 에  
콰도르 엘리트 스포츠의 성공을 달성하는 핵심 요소가 될 수 있  
는 방법을 제시하는 것이다. 이를 위해 엘리트 선수, 엘리트 코

치, 관리자 및 스포츠 과학 감독 및 주요 조직원을 대상으로 심층 인터뷰를 사용한 질적 연구로 실시되었다. 본 연구의 이론적 틀은 De Bosscher, Bingham, Shibli, Van Bottenburg 및 De Knop (2006)이 개발한 국제 스포츠 성공 모델 'SPLISS'과 Nikolai Böhlke와 Maja Neuenschwander (2015)이 제안한 가이드라인이다.

스포츠 조직을 위한 관리 모델은 본 연구의 주제에 맞게 수정 보완하여 '3 단계 프로세스'로 재구성하였다. 본 연구 결과 핵심 자원을 구별하고 분석하여 다음과 같은 전략을 수립하였다. 모델은 1) Packianathan Chelladurai (2014)가 제안한 시스템의 입력 처리량 출력 개념화, 2) Robinson & Minikin (2012)의 경쟁 우위 조건, 3) 자원, 기능 및 경쟁 우위 간의 링크 Robinson & Minikin (2012)의 NOC. 분석을 토대로 명확한 전략과 정책이

실행되도록 제안하였다. the High Performance Training Centers  
는 내부 자원과 지역 주체가 강점을 보완하고 발전을 위한 시너지  
효과를 창출해야하는 전략 인 '지역 전략 스포츠의 우선 순위  
화' 전략의 실행을 통해 엘리트 스포츠 성공을 달성하는 핵심  
요소가 될 수 있다. 선택된 스포츠는 지역의 고도 조건과 관련  
이 있으며 실제 엘리트 스포츠 성공을 달성 할 가능성이 가장  
높은 스포츠이다. 또한 본 연구는 에콰도르의 the High  
Performance Training Center와 마찬가지로 스포츠 관리 이론과  
모델을 어떻게 조합하여 개발 도상국의 특정 상황에 적용 할 수  
있는지 보여준다. 이러한 요소들의 결합은 스포츠 매니저가 스포츠  
조직, 특히 엘리트 스포츠 시설을 개선 할 수 있는 기반을  
제공한다. 또한 이론과 모델의 적용은 스포츠 개발 자원이 제한  
적인 개발 도상국의 경우 스포츠를 개발하기 위해 해당 자원을

이해, 분석 및 조정하는 데 전략적 일 필요가 있는 전략적 관리  
로 판단된다. 본 연구 결과는 개발 된 시스템과 모델을 통한 학  
습의 중요성을 보여 주고 있을 뿐만 아니라 사회, 경제 및 문화  
적 현실에 따라 스포츠 시스템을 개발하는 방법을 찾는다는데  
그 시사점을 두고 있다.

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**주요어:** High-performance, 전문선수시설, 관리,  
개발도산국

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